



eCOMMONS

Loyola University Chicago
Loyola eCommons

Dissertations

Theses and Dissertations

1998

The Effects of Priming on Children's Attitudes Toward the Elderly

Sony Hoe
Loyola University Chicago

Follow this and additional works at: https://ecommons.luc.edu/luc_diss

 Part of the [Psychology Commons](#)

Recommended Citation

Hoe, Sony, "The Effects of Priming on Children's Attitudes Toward the Elderly" (1998). *Dissertations*. 3737.
https://ecommons.luc.edu/luc_diss/3737

This Dissertation is brought to you for free and open access by the Theses and Dissertations at Loyola eCommons. It has been accepted for inclusion in Dissertations by an authorized administrator of Loyola eCommons. For more information, please contact ecommons@luc.edu.



This work is licensed under a [Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 License](#).
Copyright © 1998 Sony Hoe

LOYOLA UNIVERSITY CHICAGO

THE EFFECTS OF PRIMING
ON CHILDREN'S ATTITUDES TOWARD THE ELDERLY

A DISSERTATION SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
DEPARTMENT OF PSYCHOLOGY

BY
SONY DAMIEN HOE

CHICAGO, ILLINOIS
MAY 1998

Copyright by Sony Damien Hoe, 1998
All rights reserved.

ACKNOWLEDGEMENTS

First and foremost, I would like to thank Dr. Denise Davidson, my advisor, mentor, and friend for her role as Chairperson on my dissertation committee, and for her valued comments on this manuscript. I am also very grateful to Dr. Scott Tindale for his feedback on all phases of this dissertation's evolution, but especially on matters related to statistics. Also, his demeanor during the nerve-wrecking moments of this dissertation process was a confidence beacon for me, and for that I am especially grateful. My appreciation also goes out to Dr. David Mitchell for contributing his expertise in gerontology, as well as to Dr. Deborah Holmes for her interest in my academic growth. I could not have asked for a better committee to work with. This dissertation is a product of the stimulating academic environment at Loyola University and I will always cherish my experiences at this institution.

I would also like to take this opportunity to thank the principals and teachers of Bartlett, Centennial, Century Oaks, Coleman, Grant, Hillcrest, Wayne, and Wheaton Christian Grammar School. Their willingness to participate in this study, despite their busy schedules and daily duties as educators, made this project possible. Also, my appreciation is extended to the parents of the first and fifth grade children; their cooperation was invaluable.

I will always be grateful to my extended family, Doc, Margaret, Meghan, Eric, Olivia, Emily, and Martin, for sharing the joys of friendship and laughter. They have all kept my questionable sanity somewhat intact and have been a source of motivation and inspiration for me. And my gratitude also goes out to my sisters, Margaret and Sylvia, for putting up with me during the stressful moments, with which this academic journey was replete. Greatest thanks of all go to my father, Swee Heng Hoe, and my wife, Helene, for their affection, encouragement, and support. I am here at this juncture in my life because of them. This dissertation is dedicated to them, with love and gratitude.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	iii
LIST OF ILLUSTRATIONS	vi
LIST OF TABLES	vii

Chapter

I.	INTRODUCTION	1
II.	REVIEW OF RELATED LITERATURE	3
	Etiology of Attitudes Toward the Elderly	3
	Evolution of the Study of Stereotypes	5
	Stereotype Development	6
	Role of Stereotypes	7
	Stereotype Maintenance	8
	Attitudes Toward the Elderly	9
	Studies on Intervention Programs and Intergenerational Contact	14
	Possible Reasons for Contradictory Results	15
	Psychometric and Methodological Issues	17
	The Cognition-Affect-Behavior Relationship	23
	Theory-Based Explanation for Differential Outcome	27
	Exemplar and Prototype Models	28
	Structure of the Prototype Model	29
	Prototypes, Exemplars, and Children's Perception of the Elderly	33
	The Influence of Context and Motivation on Perception	35
	Effects of Priming on Attitudes	37
	Purpose of the Present Study	39
	Methodological Considerations	43
III.	METHOD	45
	Participants	45
	Procedure	46
	Materials	47
	Apperception Task	48
	Administration	49
	Scoring	49
	Semantic Differential	50
	Administration and Scoring	51
	Attribute Salience Task	51
	Administration and Scoring	52

IV.	RESULTS	53
	Apperception Task Results	53
	Semantic Differential Results	59
	Attribute Salience Results	63
V.	DISCUSSION	66
	Hypothesis 1	67
	Hypothesis 2	68
	Hypothesis 3	69
	Hypothesis 4	70
	Gender Differences	71
	Age-Related Differences	71
	General Discussion	74
	SUMMARY AND CONCLUSIONS	77
	APPENDIX	
A.	CONSENT LETTER	81
B.	MEASURE OF PRIMING EFFECTS ON CHILDREN'S ATTITUDE	82
C.	CODING SCHEME FOR APPERCEPTION TASK	92
	REFERENCES	95
	VITA	107

LIST OF ILLUSTRATIONS

Figure		Page
1.	Bar Chart for Apperception Sub-Total	54
2.	Bar Chart for Trait/Personality Factor	60
3.	Bar Chart for Physical Disposition Factor	62

LIST OF TABLES

Table	Page
1. Scheffe Results for Apperception Sub-Total, by Priming Condition	54
2. Correlations for Sub-Categories Comprising the Apperception Sub-Total Score	55
3. Means for Accident/Physical Discomfort, by Priming Condition	56
4. Scheffe Results for Accident/Physical Discomfort, by Priming Condition	56
5. Scheffe Results for Adult-Related Cause, by Priming Condition	57
6. Scheffe Results for Trait/Personality Factor, by Priming Condition and Grade	61
7. ANOVA Results for Trait Personality Factor, Grade by Priming Condition	62
8. Contingency Analysis Results for Attribute Salience Task	64
9. Correlations for Apperception Task and Semantic Differential Results	65

CHAPTER I

INTRODUCTION

Over the past few decades burgeoning interest in the welfare of the elderly has brought about numerous studies designed to examine the mental constructs society has about senescence. A large number indicate that the general perception is unfavorable. Children, by eight, develop well-defined concepts and attitudes about old age (Hickey, Hickey, & Kalish, 1968), and these perceptions are established before children even develop the cognitive flexibility to critically evaluate its validity or acceptability (Devine, 1989b). There is consensus among researchers that such judgments have pervasive and far reaching consequences on the elderly. A handful of studies, however, suggest that attitudes toward the elderly are generally positive or not nearly as negative as most research indicates. Various factors have been proposed to explain these conflicting results. The purpose of this inquiry is to examine the role of priming as a contextual factor that could influence children to respond in a biased fashion, which may result in assessments that do not accurately reflect their perception of the aged.

Belief structures and thought processes govern perception, which in turn influence behavior and action. Therefore, an understanding of these cognitive components is the cornerstone in the study of human social interaction. Two constructs that are intricately related to this process of thought, perception, and behavior are attitudes and stereotypes. Attitudes, in essence, are predispositions to respond either positively or negatively toward a person or thing, and they “function as the dependent variable in the attitude-behavior link

through the mechanism of description” (Bem, 1968). Stereotypes, on the other hand, are belief sets that describe typical members of a category of people, objects, or ideas (Seltzer & Atchley, 1971).

Theorists (e.g., Glass & Knott, 1982; Triandis, 1971) define attitudes as consisting of primarily three components: (a) a cognitive component (which generally describes some category used in thinking); (b) an affective component (the emotion which is associated with a category); and (c) a behavioral component (a predisposition to action). Attitudes, therefore, are manifest in varying degrees in cognition, affect, and behavior, whereas stereotypes for the most part relate to cognition. This distinction between cognition, affect, and behavior provides a basis for understanding children’s attitudes toward the elderly, and is important for reconciling some of the disparate and contradictory results this area of research has uncovered. This distinction will, therefore, be explored in greater detail.

First, however, a brief review of studies that have addressed the etiology of attitudes and stereotypes will be carried out, followed by an examination of various research and intervention studies. Then, reasons for the contradictory results will be explored, after which a review of the exemplar and prototype approach to understanding person perception will be conducted. The focus of this inquiry is to explore the potential influence of priming on children’s attitudes toward the elderly, and its possible role in contributing to the contradictory results of earlier research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Etiology of Attitudes Toward the Elderly

How do negative attitudes develop and how are they maintained? In addressing this question one theory focused on the roles held by the elderly in primitive communities and traced its evolution to modern-day society, in what has come to be known as modernization theory. This school of thought attributes negative attitudes to the improvement in technology, as well as to the declining significance in the roles of the elderly. The shift from a hunting-gathering community to an agrarian one positively affected their status. The aged were rare, consequently they were held in high esteem and looked upon as a source of knowledge and wisdom (McTavish, 1971). However, the subsequent shift to that of an industrialized society significantly reduced their status (Branco & Williamson, 1982). Then, advancements in medical technology led to the steady increase in the elderly population, further eroding their status. In addition, mass education and the resulting increase in literacy lessened the elders' role as vestiges of cultural knowledge, wisdom, and experience (Branco & Williamson, 1982).

Another school of thought attributes the development and maintenance of attitudes to a system of social conditioning (e.g., Lott & Lott, 1968). Children acquire negative attitudes toward the aged through adults, their peers, as well as the media (Aday, Rice-Sims, & Evans, 1991). Several theories on attitude development consider adults to be the primary source of influence on children's beliefs and prejudices (e.g., Allport, 1953; Halloran, 1967; Seefeldt, Jantz, Galper, & Serock, 1977). Adams and Crane (1980) demonstrated that adults, in

particular mothers and teachers, play critical roles as socialization agents. Perloff (1977) discovered that as children grow older their attitudes closely mirror those of familiar adults. Children acquire negative attitudes at a very young age, and because their interactions with the elderly are infrequent, it is believed that they acquire attitudes from adults with whom they are in constant contact (Seefeldt et al., 1977; Sheehan, 1978).

The media are also strong influences on children's attitudes toward senescence. Research reveal that the elderly are generally ignored, but when they are referenced there is a negative bias in the portrayal. Television, for instance, tend to depict the aged as evil, unsuccessful, and unhappy, or they otherwise infantilize the elderly by depicting aging as a second stage of childhood (Arluke & Levin, 1985). In comedy Richman (1977) found negative attitudes in jokes. These attitudes, he said, were critical and hostile. Wass, Almerico, Campbell, and Tatum (1984) found very little coverage on the topic of aging or the aged in the Sunday news. When elderly individuals were featured they were depicted in mostly passive roles, and the coverage tended to be superficial and "primarily of the 'gee whiz!' variety."

An examination of children's basal readers, revealed that the number of elderly individuals depicted was disproportionate to that of the actual population, and older women were grossly under-represented in stories (Fillmer & Meadows, 1986). Also, the literature generally lacks description of older characters, which questions the appeal they have on image-dependant young readers. Other representations depict the elderly as inactive, or engaged in passive, mundane activities; and the adjectives and adverbs used to describe them tend to be derogatory and uncomplimentary, e.g., "babbling," "mean," "crabby," "crippled," "wrinkled," and "old" (Fillmer, 1984).

Evolution of the Study of Stereotypes

When the concept of stereotypes was brought to the fore by Walter Lippmann back in the early 1920s it served as nomenclature for the cognitive processes that were regarded as essentially incorrect, inaccurate, and therefore, undesirable (Fishman, 1956). Stereotypes were considered reflective of thought and attitudinal rigidity, and a result of inferior judgmental processes (Stangor & Lange, 1994). For several more decades researchers considered stereotypes to be shoddy and erroneous notions, and the resulting attitudes negative and harmful (Fishman, 1956). Such labeling tended to isolate this research from areas of psychology that dealt with what was considered the normal processes that influence person and group perception. Thus, researchers assumed rather than studied the alleged reasons for stereotype's deleterious effects (Ashmore & Del Boca, 1981).

Recent research has adopted a more neutral operational definition of stereotypes, focusing instead on the cognitive and social elements and doing away with the traditionally value-based inferences (Martin & Halverson, 1981). Stereotypes today are generally viewed as descriptive characteristics of a social group, used to identify and categorize members of the target group. Social categories facilitate the understanding of new information by structuring knowledge about the expected attributes of the target category as well as the relationship among these attributes (Fiske & Neuberg, 1990). In addition, social taxonomy is considered a necessary tool which organizes and reduces the amount of information to be attended to in the environment (Fishman, 1956; Taylor, Fiske, Etcoff, & Ruderman, 1978). There is support for this cognitive economy theory from studies showing that individuals who are not given stereotypic attributes spend more time processing stimulus items, and that with increased processing difficulty, stereotype-confirming information are processed more easily (e.g., Hamilton, Stroessner, & Mackie, 1993).

The evolution of the study on stereotypes, from one that was based on the faulty processing paradigm to one that emphasizes the structure of mental representations of social groups, has opened up lines of inquiry into a variety of areas. These include an examination of the factors that influence, promote, and limit stereotype and attitude formation.

Stereotype Development

Collectively, studies on stereotype formation suggest that the need to extract common elements for categorization is part of an innate cognitive developmental process. Categories reflect significant similarities in the environment, a natural ordering of the environment that cannot be ignored (Wilder & Cooper, 1981). Research on gender role development demonstrated children's facile use of stereotypes as a tool in information processing; nine-month-old infants are able to categorically differentiate between male and female faces (Fagot & Leinbach, 1993), thus supporting the theory that the ability to categorize is an innate element in cognitive development.

As in attitude formation, stereotype development is also influenced by familiar adults, peers, and the popular media (Dion, 1973; Kirby & Gardner, 1973). Perloff (1977) determined, in a study examining the antecedents of children's sex-role development, that children's sex-role stereotypes closely resemble those of their parents. Children whose mothers do not work outside the home have more stereotyped sex-role perceptions than children of mothers who are employed outside the home. The corollary to this study is to examine older children's stereotypes, because if stereotypes are environmentally influenced then the strength of gender-related associations should increase with age. Martin, Wood, and Little's (1990) research provided this support. They demonstrated that stereotypic judgments of older children are more extreme than those of younger children, suggesting that the passage

of time allow for older children to acquire and process more deeply those stereotypes to which the society at large subscribes.

Role of Stereotypes

In order to better understand the mechanisms that maintain stereotypes it is necessary to first examine the role stereotypes play in the cognitive developmental process. In addition to being an essential tool for cognitive economy, stereotypes function as a template in the development of gender identity. They serve as guideline for behaviors associated with a particular label (Cauthen, Robinson, & Krauss, 1971). For example, acceptable behaviors and characteristics associated with the label “girl” would be, among other things, playing with dolls, having long hair, and wearing dresses. Stereotypes also serve to define behaviors that tend to be excluded from the repertoire of the designated label. Being a “boy” would mean not wearing anything pink, not engaging in certain activities such as sewing or playing with dolls, and not having a ribbon in one’s hair. Gelman, Collman, and Maccoby (1986), proposed that young children recognize category labels as important pieces of information that permit inferences about enduring properties of category members. This understanding of enduring properties influences information processing by structuring experiences, regulating behavior, and providing the bases for making inferences, interpretations, and predictions on the behavior of others (Fagot & Leinbach, 1993).

Stereotypes assist in defining group membership by allowing the perceiver to distinguish and differentially evaluate members of the in-group and out-group (Martin & Halverson, 1981). The need to establish and circumscribe group membership appears to be an important element in social interaction. Studies, for instance, have shown that perceived intergroup differences can be brought about by cognitive mechanisms alone (Hamilton, 1979).

By simply classifying individuals into arbitrarily-defined groups, respondents in Schaller and Maass' (1989) study rated in-group members more favorably and demonstrated memory biases for certain information. No such tendencies were displayed in rating nonmembers. Similarly, Brewer and Weber's (1994) respondents displayed assimilation and contrast effects when identifying in-groups and out-groups, the classification of which was based ostensibly on the results of a perceptual estimation task. These results demonstrate that the simple act of categorization, based on any arbitrary dimension, can lead to differential assessment and attitudes (see Taylor et al., 1978).

Therefore, group membership can be delimited along several possible stimulus dimensions depending on what is salient to the perceiver (Dovidio, & Gaertner, 1993). The category-related information that young children find salient pertains to gender identification, particularly the identification of characteristics relevant to their own sex. It is only later that children learn the associations for the other sex. The reason for this sequential acquisition of information is that the learning of complex relationships requires either direct experience with the related component items or repeated exposure and practice with the information before inferences can be drawn (Martin et al., 1990). Due to the socialization processes involved, it is only over time that children acquire the associations that are relevant to categories other than their own.

Stereotype Maintenance

However, despite the susceptibility of perception to contextual variables, stereotypes tend to be enduring and resistant to change. Once stereotypes are established less real differences are required to maintain them (Campbell, 1967). In the face of contrary evidence, inconsistent information are altered or discounted in order to accommodate the existing

stereotype (e.g., Carter & Levy, 1988; Hamilton, 1979; Snyder, 1981). Also, respondents have been shown to display superior recall for behavioral events that confirm expectancies, and a lack of enhanced recall for disconfirming instances (e.g., Rothbart, Evans, & Fulero, 1979). In a meta-analysis of 26 studies, Fyock and Stangor (1994) concluded that expectancies brought about by stereotypes produce strong consistency effects and pressure to discount or distort inconsistent information. Doka's (1985) study supported this assessment. Adolescents perceived elderly stimuli who did not conform to stereotyped impressions as special and unique, and as a result, failed to generalize their positive perceptions of those apparently non-conforming individuals to the elderly population at large.

Other studies that have examined the mechanisms by which information is processed and retrieved from memory have uncovered another element that contributes to the endurance of stereotypes. It has been well established that systematic biasing occurs during the encoding of information (e.g., Koblinsky & Cruse, 1981; Stangor, 1988; Taylor et al., 1978), however, in their landmark study, Snyder and Uranowitz (1978) demonstrated that biasing can occur during retrieval as well. Individuals presented with an extensive "case history" of a fictitious character named Betty reconstructed the information they had previously received when they were presented with additional information a week later. This is evidence that retrieval processes can be similarly biased as during the initial processing of information, which contributes to the resilience of stereotypes.

Attitudes Toward the Elderly

Interest in society's stereotypes and attitudes toward the elderly has precipitated a large number of studies, the majority of which indicate that general perception of the elderly is unfavorable (e.g., Bennett, 1976; Branco & Williamson, 1982; Page, Olivas, Driver, & Driver,

1981; Tuckman & Lorge, 1952; Weinberger, 1979). Hickey et al. (1968) believe that children, by eight, acquire concepts of old age and old people. For the most part, the aged are stereotyped as sick, ill, tired, ugly, mentally slower, forgetful, isolated, grouchy, and withdrawn (McTavish, 1971; Seefeldt, 1984). When asked what types of activities they would engage in with the elderly, the majority of children reported passive (e.g., talking on the porch, watching television, playing cards, etc.) or helping (e.g., assisting them across the street, helping with household chores, keeping them company, etc.) behaviors (Jantz, Seefeldt, Galper, & Serock, 1977) and children did not look forward to the prospect of growing old (Burke, 1981). Such impressions tend to have pervasive and far reaching consequences.

In a meta-analytic study, McTavish (1971) found an overall theme of personal rejection and prejudice towards old people. Children prefer the company of young adults to that of the elderly (Miller, Blalock, & Ginsburg, 1984; Page et al., 1981). Cross-cultural studies reveal that such attitudes, however, are not unique to America (Seefeldt, 1984; Seefeldt & Keawkungwal, 1986; Slaughter-Defoe, Kuehne, & Straker, 1992).

In a study conducted by Davidson, Cameron, and Jergovic (1995), they demonstrated that children have an overall bias for negative information, however, when children were provided additional statements (both positive and negative) about the elderly, they recalled more negative statements than positive ones irrespective of the valence of the main body of information (see Davidson et al., 1995 for detailed description). In contrast, children who were not provided any age data recalled more positive statements if they were given positive information, and more negative statements if they were given negative descriptions. In addition, the authors noted that some of the children tended to distort information about the elderly by transforming positive statements into its negative form (e.g., recalling a described healthy older person as being sick).

Such studies show that value judgments can be influenced by the perceived age of the stimulus person. Reno (1979), for instance, found that when it comes to the attribution of success or failure, participants imputed failure on the part of an older person to more stable ability deficits or to the inherent difficulty of the task. Failure on the part of a young person, on the other hand, was ascribed to temporary, mutable factors such as lack of effort. In assessing competence in a physical activity, children were demonstrably affected by the perceived age of the stimulus person; older adults were viewed as less proficient on each of the activities examined (Ostrow, Keener, & Perry, 1987). Ostrow et al. found a high correlation between children's perception of motor skill competence and their perception of motor skill appropriateness, based on the age of the individual. Such negative attitudes and stereotypes of the older adults' physical constitution tend to have implications in the work place as well. Tuckman and Lorge, (1952) for instance, found that persistent myths prevail. For example, older workers are thought to be more prone to illnesses and injuries, and that they take longer in getting over these events.

Although it may be hard to accurately gauge the impact these stereotypes have, the consequences can be observed in terms of the employment opportunities, welfare services, and quality of medical care available to the elderly (Auerbach & Levenson, 1977; Burke, 1981). For instance, research indicate that a large number of medical and nursing students express negative attitudes toward the elderly and describe work in geriatrics in the least positive terms compared to other areas of medicine, such as, obstetrics and pediatrics (Bennett, 1976). It is hard to imagine that such attitudes are abandoned when these students graduate to become practicing medical professionals.

As a consequence, there has been a plethora of research designed to look into the possibility of altering such negative impressions (e.g., Aday et al., 1991; Brown, & Grams,

1983; Carstensen, Mason, & Caldwell, 1982; Glass & Knott, 1982; Glass & Trent, 1980; Krause & Chapin, 1987; Labouvie-Vief, & Baltes, 1976; Peacock, & Talley, 1984; Seefeldt, 1987a; Seefeldt, 1989) and of ameliorating the undesirable effects through intergenerational contact (e.g., Caspi, 1984; Couper, Sheehan, & Thomas, 1991; Dellmann-Jenkins, Lambert, & Fruit, 1991; Dellmann-Jenkins, Lambert, Fruit, & Dinero, 1986; Dooley & Frankel, 1990; Kocarnik & Ponzetti, 1986; Lambert, Dellman-Jenkins, & Fruit, 1990; Murphy-Russell, Die, & Walker, 1986; Olejnik & LaRue, 1981; Rich, Myrick, & Campbell, 1983). One study demonstrated that out of three primary methods of changing attitudes (discussion, information or knowledge, and direct experience), direct experience with the elderly was the most important mediating factor in predicting behavior, as well as for producing change in attitude (Murphy-Russell, et al., 1986).

There has also been research conducted to examine the impact of intergenerational programs on the elderly (e.g., Corbin, Kagan, & Metal-Corbin, 1987; Kuehne, 1992; Lowenthal & Egan, 1991; Miller, 1986; Mutran & Reitzes, 1984; Newman, Vasudev, & Onawola, 1985; Newman & Riess, 1992; Newman, & Ward, 1993; Reinke, Holmes, & Denney, 1981; Saltz, 1971; Tierce, & Seelbach, 1987). Numerous papers have been written to either espouse the benefits or serve as guideline for other intergenerational programs (e.g., Chamberlain, Fetterman, & Maher, 1994; Cherry, Benest, Gates, & White, 1985; Dunkle & Mikelthun, 1983; Hill, 1987; Kocarnik & Ponzetti, 1991; Kopac & Price, 1987; Liebman, 1984; Seefeldt et al., 1977; Smith & Newman, 1993; Strom, 1988; Wrenn, Merdinger, Parry, & Miller, 1991).

To the uninitiated, the number of studies and articles written on the subject would constitute overwhelming evidence that prevailing stereotypes and attitudes toward the aged are generally negative. This, however, is not the case. A handful of studies (e.g., Ivester and

King, 1977; Nishi-Strattner & Myers, 1983; Seltzer & Atchley, 1971) found that attitudes toward the elderly are generally positive or not nearly as negative as the majority of research indicate. Others suggest that attitudes toward aging and the elderly are complex and multifaceted (Brubaker & Powers, 1976; Fillmer, 1984; Jantz, et al., 1977; Marks, Newman, & Onawola, 1985; McTavish, 1971; Stier & Kline, 1980; Thomas & Yamamoto, 1975). For instance, the widely-cited study conducted by Thomas and Yamamoto (1975), uncovered a mixture of attitudes. They found that although children held an overall positive picture of adults, their responses on the affect dimension (e.g., happy-sad, exciting-dull) became increasingly less positive, as the age of the adult increased. Thomas and Yamamoto also discovered that on the Activity-Potency factor (e.g., strong-weak, fast-slow), the old person was considered to be in a negative position compared to middle-aged and young adults.

Jantz and his colleagues (1977), on the other hand, found that when children reported their cognitive representation of the elderly in affective terms, their comments tended to be positive. However, comments tended to be negative when the children related their knowledge in physically descriptive or behavioral terms (Seefeldt et al., 1977). Marks et al. (1985) obtained results that were analogous to those of Jantz and his colleagues (1977) when they utilized a test (the Children's View on Aging questionnaire) that assessed the cognitive, affective, and conative (behavioral intent) components of attitudes. Fillmer (1984) found that children selected positive adjectives to describe photographs of the elderly, but on the other hand, expressed reluctance to associate with those same older adults when they were provided with behaviorally-descriptive situations in which to interact. These studies support the argument that attitudes are multi-dimensional.

Studies on Intervention Programs and Intergenerational Contact

Despite the evidence to the contrary, research that highlighted the prevailing negative perception of the elderly has served as catalyst for numerous intervention studies. The myriad papers espousing the benefits of intergenerational contact or educational intervention, as a means of altering attitudes, could easily draw an observer to the conclusion that such programs have indubitably positive results. The outcome of several studies, however, would moderate such a conclusion. For example, the results Olejnik and LaRue (1981) obtained were mixed. Although, in their sample, the adolescents' perceptions of the aged became less negative and stereotyped, their willingness to interact with the aged decreased as a consequence of intergenerational contact. Miller et al. (1984), found that higher frequency of contact with adults older than seventy was not significantly related to any improvement in children's attitudes. They in fact discovered that the children consistently preferred younger people, and considered them more fun, nicer looking, and more physically able than older adults. Participation in an oral history project also did not have any significant impact on knowledge about, and attitudes toward, aging or the elderly (Doka, 1985). Similarly, a month-long experiment with a film series coupled with class discussions did not result in improved attitudes among a group of elementary school children (Krause & Chapin, 1987).

Although some of these studies demonstrate that intervention programs may have inconsequential results on attitudes, there are others that reveal that such well-intentioned programs may in fact have deleterious consequences. For example, the attitudes of a group of undergraduate students deteriorated significantly after one semester of classroom interaction with the elderly (Auerbach & Levenson, 1977). In a landmark study, Seefeldt (1987b) discovered that her preschool participants, after regular visits to a nursing home, held more negative attitudes toward their own aging and the elderly compared to a group of children

without this contact. Seefeldt reported that the staff of the nursing home and the preschool, however, felt the visits were of great benefit to both the children and the nursing home residents.

In one study, contact, which was hypothesized to be a moderating factor on negative perception, was examined and the authors found that increased interaction does not translate to improved attitudes. Rosenwasser, McBride, Brantley, & Ginsburg (1983) presented a group of preschoolers with a series of photographs comprising of young and old models, and then asked several questions to assess the children's underlying attitudes. A questionnaire sent to parents determined the frequency and quality of their child's contact with adults over 60. Rossenwasser and her colleagues found a negative correlation between the number of old people chosen on attitude questions and the contact data obtained from the parents.

Possible Reasons for Contradictory Results

The inconsistencies in the results highlight the complex and multi-dimensional nature of attitudes. However, pressing questions linger, such as, if attitudes are indeed complex and multi-dimensional, then why is there a disproportionately large number of studies indicating that the prevailing attitudes toward the elderly are negative? Also, if intervention programs are as effective as most studies suggest, then why are they not uniformly replicable? Several reasons have been proposed to account for the disparate outcomes.

One explanation is that researchers are overly sensitized to the negative aspects of senescence and anticipate them where none exist (Seltzer & Atchley, 1971). Studies have shown that the researchers' expectations regarding the outcome of an investigation may influence the data collected (e.g., Rosenthal & Rosnow, 1984). Since most research are designed with clear expectations about the likely outcome, it is possible and even quite likely

that some of the results were influenced by the investigator's hypotheses or biases, thus contributing to the higher incidence of negative reports.

A review of gerontology-related research revealed that the wide variety of methods utilized in these studies have very likely contributed to the inconsistent results. One predominant variation in methodology involves the cornerstone of any research, that is, the instrument(s) to assess the construct in question. A way in which the different instruments is thought to have contributed to the disparate outcomes is based on the measures' differential resistance to change. Hicks, Rogers, and Shemberg (1976) posited that some attitude measures may be more sensitive than others, and as a result, spuriously indicate more negative attitude than the less sensitive measures. This sensitivity differential may consequently represent responses to intervention programs in diverse ways. For example, a program may be considered a failure because a change in attitude was not reflected in the measure when it may have, in actuality, improved the participants' perception.

In attitude assessment studies, the researcher's theoretical orientation will, for the most part, determine the choice of instruments to be used to measure the respondent's attitude. Some instruments, for example, Rosencranz and McNevin's (1969) semantic differential, document attitudes as a multi-dimensional construct. When the authors factor-analyzed the data from their measure they obtained three factor loadings that they termed "Instrumental-Ineffective," "Autonomous-Dependent," "and Personal Acceptability-Unacceptability." Similarly, Thomas and Yamamoto (1975) extracted three dimensions from their use of the semantic differential, which they in turn termed "Evaluation," "Affect," and "Activity-Potency." Instruments, therefore, need to capably reflect the different facets of attitudes that could potentially be elicited by a multiplicity of stimuli (see Hicks et al., 1976; Kafer, Rakowski, Lachman, & Hickey, 1980; Ostrom, 1989). The use of a single measure will not

adequately reflect the complex nature of attitudes (Hicks et al., 1976; McTavish, 1971; Naus, 1973; Ostrom, 1989).

The results of several studies support the tripartite theory in that different outcomes were obtained when distinct dimensions were measured. For example, Jantz and his colleagues (1977) reported that children provided positive comments about the elderly when they communicated information in affective terms. However, when information was communicated in physically-descriptive or behavioral terms, their comments tended to be negative. A uni-dimensional measure would not have reflected this difference. The effect of juxtaposing data from studies that are based on opposing models may lead to conclusions that are inconsistent and contradictory (Hicks et al., 1976).

Psychometric and Methodological Issues

Two touchstones of any psychometric measure are its reliability (consistency) and validity (accuracy). Several popular and widely-used measures have been criticized due to their questionable reliability and validity. The Old People Questionnaire, developed by Tuckman and Lorge (1953) is one such measure. Kogan (1961), for example, criticized Tuckman and Lorge for failing to use an attitude scaling procedure, and for paying little attention to the psychological correlates of attitudes toward old people. The Old People Questionnaire is also thought to lack internal consistency (an important measure of reliability) when the scale was divided into thirteen categories without Tuckman and Lorge reporting any analyses to indicate whether the items in each category were actually unidimensional (see Green, 1981). Kilty and Feld (1976) questioned the appropriateness of the authors' derivation of one aggregate score for all those items from the different categories.

Palmore's (1977) criticism of both Tuckman and Lorge's and Kogan's questionnaires

was that the tests were too long, that they confused factual statements with attitudinal statements, and that the factual statements used were undocumented, which therefore, left the reader without any proof other than the authors' assertions that the statements were true or false. Palmore, in an attempt to avoid those disadvantages, developed his own measure that consisted of 25 true-false questions. His Facts on Aging Questionnaire, however, was in turn critiqued as being laden with ambiguous terminology, "double-barreled" statements, and subjective statements presented as objective facts (Miller & Dodder, 1980). Palmore's suggestion that his quiz be used as an indirect measure of bias was also challenged by Holtzman and Beck (1979) who concluded that the use of the measure as such would be a "hazardous undertaking." When the reliability or validity of a measure is compromised it, in turn, undermines any conclusion that can be drawn from the results.

There are tests that were designed to circumvent some of the shortcomings of earlier instruments, but even those were not exempt from criticism. For instance, Jantz, Seefeldt, Galper, and Serock (1976) designed the CATE (Children's Attitudes Toward the Elderly) as an instrument to measure the different components of attitudes through the use of four subtests: a Word Association subtest (to assess the cognitive, affective, and behavioral components of attitudes), a Semantic Differential subtest (to assess the evaluative dimension), a Picture Series subtest (to elicit children's attitudinal responses when presented with concrete examples of young and old individuals), and a Concept of Age subtest (to assess the child's level of cognitive development with regard to age concepts).

Baggett (1981) pointed out two major limitations of this instrument. The first involves the Picture Series subtest, and the criticism is that only men were depicted despite the fact that the majority of the older population are women. Researchers have reported being impressed by the number of children whose grandmothers were the only older person these children

knew, and the only older person with whom they engaged in activities (Baggett, 1981). Jantz et al. did not offer any explanation as to why only pictures of men were used in their measure.

The second criticism involves the scoring procedure of the test. Baggett (1981) highlighted the fact that in the question assessing children's concept of old people, researchers were instructed to code answers such as "They have grey hair," or "They have wrinkles," as negative affective responses. This categorization in itself, according to Baggett, constitutes a validation of negative stereotypes because in reality the physical aspects of aging, which is salient to children, would require a response of this nature to accurately reflect the child's knowledge of the physical changes associated with increasing age. These descriptions, therefore, are factual and not necessarily negative.

Other instruments that were used to gauge attitudes have made their own contribution to the inconsistent results obtained in the field. For example, Miller et al. (1984), in their study, utilized an instrument similar in construct to the one used by Rosenwasser et al. (1983), with questions such as: "Which person would buy you the best gift?" "Let's pretend that you are sick. Which person would you like to take care of you?" and "Which person could run the fastest?" Given the number of research indicating that children have very little contact with the elderly, it is hardly surprising that their choices favored the younger stimulus individuals who were, most likely, closest in age to the children's parents. Furthermore, quasi-factual statements that assessed children's perception of the older person's athletic abilities were also being used as indicative of negative evaluation.

In addition, it has also been suggested that the methodology employed in attitude research may inherently elicit responses respondents might not otherwise make. For example, Wingard, Heath, and Himelstein (1982) demonstrated that when participants were induced to make comparative judgments between old and young people, they expressed more extreme

negative attitudes than individuals who were prompted to make only isolated judgments of old people. Respondents are susceptible to demand characteristics and their judgments can be influenced by their perception of what is expected of them (Green, 1981). Furthermore, as Feldman and Lynch (1988) pointed out, measurement can alter the relationship among beliefs, attitudes, and behavior. It may create cognition when none previously existed, and this newly created attitude may then be retrieved by the respondent to answer subsequent questions as well as serve as a basis for a behavioral response. In doing so, a spurious correlation between attitude and behavior may be created and then observed by the researcher.

Another twist to this already vexing situation is the proposal that attitudes, for the most part, are temporary constructions, and that they vary from time to time depending on the information that is most plausible and accessible (Wilson & Hodges, 1992). Questioning procedures may influence accessibility, which can in turn influence the participant's response. Wilson and Hodges, however, acknowledged the existence of stable attitudes and proposed that the key moderating variable is its structure. Attitudes with consistent affective and cognitive components are more stable and are, therefore, less susceptible to change than the ones with inconsistent components. Thus, inconsistent attitudes are the ones most likely to be influenced by context effects.

One other factor that has significant influence on the outcome of attitude assessment and intervention studies relates to the disparate stimulus population utilized (Green, 1981). It has, for instance, been demonstrated that contact with the elderly in a hospital setting appears to have a consistently negative effect on attitudes (Bennett, 1976). Some researchers (Caspi, 1984; Rosencranz & McNevin, 1969) have predicted that if cross-age contact were to occur in an institution or clinical setting, it would probably serve to foster stereotypes. When Seefeldt (1987b) used a population of institutionalized elderly to interact with a group of preschoolers,

she confirmed this prediction; the attitudes of the children became more negative. Seefeldt concluded that seeing sick, passive elders only served to reinforce children's negative perception of old age.

However, it may be that contact with institutionalized elders does not inherently result in the development or enhancement of negative attitudes, but rather the critical determining factors are the nature and quality of contact (see Couper et al., 1991; Knox, Gekoski, & Johnson, 1986). In Dellmann-Jenkins et al.'s study (1991), children who were exposed to a variety of older persons, including the aged in nursing homes, demonstrated more positive behaviors and attitudes toward the elderly. The authors' main emphasis was on quality of programming; they planned and structured interactional opportunities with a wide spectrum of elderly individuals, in combination with exposure to a variety of educational materials that dealt with senescence. Kocarnik and Ponzetti (1986) also alluded to the need for quality when they suggested that programs should be designed to enhance interaction rather than simply provide contact. When Miller et al.'s (1984) study indicated an absence of a relationship between amount of contact and attitudes toward the elderly, they attributed the result to their emphasis on quantity rather than quality of contact as being a possible contributing factor.

Another methodological variance that has contributed to the conflicting results is the lack of distinction between the generalized and familiar elderly (Brubaker & Powers, 1976; Dobrosky & Bishop, 1986; Hickey, Bragg, Rakowski, & Hultch, 1978). Different cognitive processes may be involved depending on whether a social group or an individual from that group is being evaluated (Brewer, Dull, & Lui, 1981). Marcoen (1979) demonstrated that children clearly differentiated between aged persons and their grandparents—they held stereotypical representations of old people in general but their images of their grandparents are more realistic. Some studies, however, did not take this distinction into account, and children

were instructed to think of their grandparents as examples of old people (e.g., Hickey et al., 1968).

In addition, children tend to have a more positive perception of their grandparents compared to the generalized elderly (Burke, 1981; Marcoen, 1979). For instance, the results of Thomas and Yamamoto's (1975) study indicated that children positively evaluated the generalized elderly, however, they also reported a tendency for all their respondents to represent the old person as a loving grandparent type. Kogan, Stephens, and Shelton (1961) posited that a child's positive emotional relationship with one or more grandparent might serve to mitigate negative feelings toward old people, thereby suggesting that two separate emotional responses are involved in evaluating grandparents and the generalized elderly. Taken together, there appears to be ample support that it is methodologically inaccurate to consider outcomes of measures that assessed children's attitudes toward their grandparents as indicative of attitudes toward the elderly in general or vice versa.

A related procedural variable concerns the manner in which the stimuli (general description, picture, or direct contact) is introduced to participants in attitude and stereotype assessment studies. Experts theorize that when participants are asked to respond to a general category of persons, they are forced to rely on global stereotypes or expectancies that do not take into account characteristics of individuals within that category (Green, 1981). However, when individual stimulus persons are used there is a tendency that the characteristics they possess may violate the general stereotypes, which would then cause the individuating attributes to become more salient, and consequently elicit more positive ratings (Branco & Williamson, 1982; Green, 1981; Reno, 1979). The results of Weinberger and Millham's (1975) study support this theory. They established that children's expression of belief statements toward a generalized group of old people are appreciably different from their

evaluations of a particular member of that group, the latter being more positive. Participants who were given individuating information of an old person viewed the characteristics of the fictitious individual as exceptional, in comparison to those same characteristics attributed to a much younger person, and consequently rated the older person more favorably (Crockett, Press, & Osterkamp, 1979).

The Cognition-Affect-Behavior Relationship

Another contributing factor to the inconsistent outcomes in attitude research stems from the general lack of distinction between cognition, affect, and behavior. Most theorists agree that the characteristic attribute of attitude is its evaluative dimension, and that since this construct is not directly observable, it must be inferred from measurable reactions to the stimulus object (Ajzen, 1993). These reactions fall into two basic response categories, verbal and nonverbal. Many researchers operate under the assumption that verbal responses reflect a person's attitude, whereas nonverbal actions are measures of behavior, the latter considered as being "more real" (Ajzen, 1993). Ajzen argued that both verbal and nonverbal responses are observable, and more importantly, that both types of behavior can reflect the same underlying disposition. Verbal responses to an attitude object, when considered in terms of the tripartite model, i.e., the cognitive, affective, and conative dimensions, consist of expressions of beliefs, feelings, and intentions respectively. Nonverbal responses, in relationship to those same dimensions, can be observed in the form of perceptual, physiological, and motor responses (Ajzen, 1993). He emphasized that both types of behavior must be submitted to standard psychometric procedures, and then, only some responses (verbal and nonverbal) will be adequate to assess a given attitude.

Ajzen (1993) posited that as soon as a perceiver associates a set of attributes with a

category, that individual forms an attitude of the target. He theorized that people form beliefs about an object by associating it with certain attributes. Since the attributes that come to be linked to the object are already valued positively or negatively, an attitude is automatically and simultaneously acquired. There is consensus among theorists that these attitudes may potentially be translated into a response of some form; positive attitudes would result in positive feelings, thoughts, and behaviors, whereas negative attitudes would elicit the corresponding negative responses toward the stimulus (Pratkanis, 1989). Consequently, in a given situation, positive behavior would be reflective of underlying positive attitude, and negative behavior reflective of a corresponding negative attitude.

Also, in order to make a valid comparison it is important to ensure that the verbal and nonverbal measures being compared are indicators of the same underlying attitude, that is, the level of generality or specificity of the attitude measure should correspond with the level of the behavioral measure (Fazio, 1990). In other words, since specific behaviors are best predicted by specific attitude measures, and general patterns of behavior or multiple behaviors are best predicted by general attitude measures, they should be used accordingly (Ronis, Yates, & Kirscht, 1989). If a study, for example, were to focus on the relationship between the verbal evaluation of a global category (e.g., evaluation of the generalized elderly) and a very specific nonverbal behavior (e.g., sitting on an old person's lap while being read a book), then the derived verbal and nonverbal indicators may be reflective of two separate attitudes (Ajzen, 1993).

Ajzen's approach, therefore, implicitly assumes that an attitude-behavior relationship exists and that the inability of some measures to capture the elements of the relationship is affected by extraneous variables and not the actual absence of a relationship. Current research focusing on the relationship between attitudes and behavior no longer question whether

attitudes predict behavior, but rather when attitudes predict behavior (Finnerty-Fried, 1982). The “when” approach makes the assumption that attitudes are the precursors to behavior. Considered together with the evidence that not all attitudes are manifested in behavior, this viewpoint suggests that attitudes are a necessary but insufficient component of behavior.

One study clearly illustrates this point. Researchers traveled with a Chinese couple and stopped at 66 sleeping places and 184 eating places, and were refused service only once. However, when the researchers sent a questionnaire to the owners of those establishments, enquiring as to whether they would take in members of the Chinese race as guests, 93% of the restaurants and 92% of the hotels said they would not serve Chinese people (Allport, 1953). It appears that although these individuals harbored latent attitudes towards a particular social group, their attitudes were not overtly manifested in behavior. This is consistent with the findings of other research that have indicated that verbally-expressed attitudes do not necessarily correlate highly with overt behavior (Ronis et al., 1989).

The results of studies examining the attitude-behavior relationship tend to be inconsistent, and occasionally they contradict each other. For example, it has been demonstrated that although some children have negative views about being old they still express willingness to interact with older persons (Marks et al., 1985). Such inconsistencies have led researchers to question the value of the traditional approach of quantifying the number of misconceptions a person has, as opposed to analyzing the assumptions upon which the individual acts (e.g., Lawrence, 1974). Other researchers question the relationship between attitude and behavior, and in particular, if negative attitudes toward older people actually translate into negative behavior towards them (Naus, 1973). The merit of such arguments is that they highlight the need for more research to identify the parameters of the attitude-behavior relationship.

attitudes predict behavior, but rather when attitudes predict behavior (Finnerty-Fried, 1982). The “when” approach makes the assumption that attitudes are the precursors to behavior. Considered together with the evidence that not all attitudes are manifested in behavior, this viewpoint suggests that attitudes are a necessary but insufficient component of behavior.

One study clearly illustrates this point. Researchers traveled with a Chinese couple and stopped at 66 sleeping places and 184 eating places, and were refused service only once. However, when the researchers sent a questionnaire to the owners of those establishments, enquiring as to whether they would take in members of the Chinese race as guests, 93% of the restaurants and 92% of the hotels said they would not serve Chinese people (Allport, 1953). It appears that although these individuals harbored latent attitudes towards a particular social group, their attitudes were not overtly manifested in behavior. This is consistent with the findings of other research that have indicated that verbally-expressed attitudes do not necessarily correlate highly with overt behavior (Ronis et al., 1989).

The results of studies examining the attitude-behavior relationship tend to be inconsistent, and occasionally they contradict each other. For example, it has been demonstrated that although some children have negative views about being old they still express willingness to interact with older persons (Marks et al., 1985). Such inconsistencies have led researchers to question the value of the traditional approach of quantifying the number of misconceptions a person has, as opposed to analyzing the assumptions upon which the individual acts (e.g., Lawrence, 1974). Other researchers question the relationship between attitude and behavior, and in particular, if negative attitudes toward older people actually translate into negative behavior towards them (Naus, 1973). The merit of such arguments is that they highlight the need for more research to identify the parameters of the attitude-behavior relationship.

Fishbein and Raven's (1962) effort to distinguish between "belief" and "attitude" has helped researchers account for some of the inconsistent outcomes. They suggested that beliefs (the probability dimension of a concept), which are generally attributed to cognitive components, and attitudes (the evaluative dimension of a concept), which comprise of affective or motivational aspects, are two separate constructs. To test their theory they devised a set of scales that measured the belief and attitude constructs independently. They found no correlation between the two. They defined the cognitive structure as comprising of two separate components: "belief in" and "belief about."

This distinction has elements that parallel Devine's (1989a) argument, that stereotypes and personal beliefs are conceptually distinct cognitive structures. According to Devine, stereotypes relate to one's knowledge about a social group, which tends to be automatically applied to members of the group. These automatic processes involve the unintentional or spontaneous activation of associations or responses that have been developed through repeated activation in memory. Personal beliefs, on the other hand, represent the propositions that are endorsed and accepted as being true, which are for the most part related to the controlled processes of conscious cognitive activity.

Devine (1989b) argued that due to common socialization experiences, individuals in a society are equally knowledgeable about the cultural stereotypes associated with a particular group. And because stereotypes are a well learned set of associations, they are automatically activated in the presence of that social group. However, these automatically-activated responses may be inhibited if there is enough time and cognitive capacity available for the executive processes to assume control (Devine, 1989b; Stangor & Lange, 1994). There is compelling empirical support for this theory based on the studies that have examined the effects of cognitive busyness on the activation and application of stereotypes. It appears that

once a stereotype is activated, people are more likely to rely on it when conscious deliberation becomes difficult (Devine, 1989b; Dovidio & Gaertner, 1993; Stangor & Lange, 1994). Cognitive busyness decreases the likelihood that a particular stereotype will be applied, however, once activated, the likelihood that the stereotype will be applied increases (Gilbert and Hixon, 1991). The validity of the belief-stereotype distinction was reinforced in Couper et al.'s (1991) intervention study. Although they were able to positively influence children's attitudes toward the elderly, the children's generalized stereotypical notions of old people remained unchanged. The results of these studies suggest that knowledge of a stereotype should not be treated as reflective of the respondent's underlying attitude or belief.

Theory-Based Explanation for Differential Outcome

As previously discussed, a main contributing factor to the discrepant outcomes in research on attitudes toward the elderly is the lack of distinction between the individualized and generalized elderly. Some studies evaluate children's attitudes toward their grandparents and afterwards treat the results as indicative of children's general attitudes toward the elderly, essentially ignoring the multiple ways in which a target can be categorized. Several studies indicate that the expression of belief statements toward a group is comprised of a separate response system from the judgment of a particular member of that group (Branco & Williamson, 1982; Brewer et al., 1981; Green, 1981). Other studies have found, when ratings of individual old and young stimulus persons were compared, that the individual old stimulus person was rated as positively and sometimes more positively than the younger stimulus persons (Weinberger & Millham, 1975).

Taken together, these results indicate that different mechanisms may be involved in guiding perception and attitudes, particularly when it comes to comparing a generalized group

of elderly to a younger stimulus population. There are two models that promote a better understanding of the dynamics of individual versus group information processing, and may help account for some of the inconsistent results. They are the exemplar and prototype models. Exemplars and prototypes are both theorized to affect social judgment, however, the mechanisms by which judgment is affected differ.

Exemplar and Prototype Models

Smith and Zárate (1992) defined an exemplar, in essence, as being a “cognitive representation of an object of the same type as the current target of judgment.” It is a means by which new instances are categorized based on their similarity to specific familiar instances of the category. The net effect is that no abstracted representations of social groups are ever formed or stored in memory. Instead, specific individuals or behaviors serve as the element of comparison when a new target is encountered (Smith & Zárate, 1992). These idiosyncratic information are then stored together with the stereotypical characteristics in memory (Stangor & Lange, 1994). Consequently, exemplars are thought to be less susceptible to inaccuracies and distortions.

According to Smith and Zárate (1992), exemplar information can range from being detailed and complete to minimal representations that encompasses only two or three attributes. Knowledge of categories are distributed across multiple exemplars, and this, according to Smith (1990), enables a new stimuli to be rapidly and accurately classified. The exemplar model also predicts that a new exemplar may be influenced by the properties of a previously-encountered exemplar, so that a single experience could have enduring effects. In addition, direct experience is not a prerequisite for an individual to be represented in memory. An imagined or secondhand account (e.g., a media representation) is sufficient for the perceiver to

establish a cognitive representation of the target (Smith & Zárate, 1992).

The prototype model, on the other hand, predicts that once a category is established and a prototype of that group is extracted, a distinct cognitive representation of that group is formed; when new information is encountered it tends to be assimilated into the existing representation (Cantor and Mischel, 1979). Since the goal and function of person categorization is to provide the perceiver with information to evaluate, predict, determine causality, and characterize others by typing them, a clear advantage of the prototype is that it will still allow the perceiver to fulfill this objective in the event that information is missing or inadequate, or when cognitive processing demands are high (Cantor and Mischel, 1979). This is possible because only an abstracted format is being processed, and the complexity of the stimuli is reduced, thereby enabling information to be processed much more rapidly. Consequently, valuable cognitive resources are freed up for other activities.

According to Smith & Zárate (1992), simplifying and reducing the amount of stimuli in the environment results in the omission of detailed information, which leads to increased information distortion, bias for congruent information, and a propensity for stereotype maintenance. In order to address this argument from the perspective of the prototype model, it is necessary to first examine the structure and the assumptions of the model.

Structure of the Prototype Model

One distinguishing feature of the prototype model is its definition of the various levels of inclusiveness for category membership. These categories are organized around the prototype with less prototypical members forming a continuum away from the most representative members (Cantor & Mischel, 1979). It has been proposed that membership can be defined under three levels of inclusiveness--superordinate, moderate, and subordinate (see

Cantor & Mischel, 1979). The superordinate level contains the most abstract information, and there is little overlap between attributes of neighboring categories (e.g., furniture and vehicles). At the moderate tier of inclusiveness, object classification is at its most optimal level (e.g., chairs and cars). Information stored at this level of abstraction maximizes cognitive economy while still providing a rich set of data about the objects within a category. Moderate level categories contain the most detailed description of the object with respect to their characteristic features, which easily distinguishes them from objects in other categories.

At the other end of the continuum is the subordinate level and at this level of inclusiveness, boundaries become less distinct. If one were to look at furniture as the superordinate category, and chairs as a moderate level example, then the subordinate level categories would consist of the different types of chairs (e.g., kitchen chair, dining room chair, living room chairs, etc.). The characteristic attributes (e.g., it has four legs, it is used for sitting, it has arm rests, etc.) at the lowest level of inclusiveness are shared by members of other categories to the extent that cross-category objects are no longer distinctive or differentiated (Cantor & Mischel, 1979).

An important feature of the taxonomy structure is that a particular person or object can be classified at varying levels of abstraction or inclusiveness (Cantor & Mischel, 1979). For instance, in the example provided earlier, “chair” was used as a moderate level classification, however, it could also serve as a superordinate level category member. If chairs are in this category level, then living room chair might serve as the moderate level example, and the types of living room chairs (e.g., leather, fabric, etc.) could serve as subordinate category members. It has been proposed that at any given moment a particular target may be categorized in a variety of ways depending on the context of observation, purpose, or special interests of the observer (see Cantor & Mischel, 1979).

The distinction among the three levels of inclusiveness addresses the issue of information distortion and stereotype maintenance. Based on the prototype model it is quite clear that categorization at the superordinate level would support such an outcome, because of the minimum amount of information that is supplied by the label, and the greater reliance on assumptions and abstract data. Brewer and her colleagues (1981) posited that when available information about a stimulus person is insufficient to make a specific categorization, the superordinate category level would then serve as the default value for categorization decisions and attitude formation.

Therefore, the level at which a person is categorized may influence the valence of the attitudinal response. There has been research that showed that when a group of generalized elderly was assessed, perception tended to be negative, whereas responses toward the personalized older person tended to be positive (see Green, 1981; Weinberger & Millham, 1975). Since attitude towards an elicited concept (e.g., elderly persons) could serve as an indication of the underlying stereotype valence for that concept (Ajzen, 1993), these results suggest that representation at a superordinate level of inclusiveness tends to lead to (negative) stereotype maintenance. When moderate or subordinate category levels are activated (through the personalization of the older person), however, stereotypes tend to be rejected.

It is evident that when it comes to explaining the effects of stereotypes on person perception, both the exemplar and prototype models have their strengths. There are also, however, inherent weaknesses in the two models. One shortcoming of the exemplar model is that it does not fully address the issue of stereotype development or explain the mechanisms which cause a perceiver to selectively store one attribute over another. It assumes that stereotypes about social groups do not exist a priori, but rather are calculated on-line when required (Stangor & Lange, 1994). Since instances of specific exemplars are stored, no

abstractions are made, which is inconsistent with the findings of cognitive economy research. Consequently, it is difficult to account for the differential performance of participants assessed under time constraints and cognitive business, in comparison to the non-constrained participants, using the exemplar model.

The prototype model is not faced with the same problem because its fundamental premise is that perception is comprised of abstractions of a central tendency. That is, the essence of the category and not particular instances of the category is stored in memory. New instances are compared to the abstract image, or set of features that represent the category. However, because prototypes are based on encounters with a large number of exemplars, experience with a single group member will do little to alter a perceiver's prototype (Smith, 1990). As a result, the prototype model does have trouble accounting for the long-lasting effects of single experiences with category members.

In comparing the prototype and exemplar models it may be tempting to focus on the differences and on the apparently conflicting implications of these two paradigms. Barsalou (1990), however, dismisses the differences. He believes that the distinctions between the two models are spurious and that, in fact, exemplar memory and abstraction processes are indistinguishable. He argues that the overlapping characteristics of the representations in the two models make it difficult to sharply distinguish one from the other. Most, if not all data that can be accounted for in terms of the prototype model can also be explained using the exemplar model (Stangor & Lange, 1994). Therefore, rather than focusing on their differences, it may be helpful to instead examine the areas where these two models complement each other, and how they can be utilized to better explain children's perception of the elderly.

One way to view these two apparently discrete models is to imagine them lying on

opposite ends of a continuum, with category-based processes on one end, and individuating processes on the other (Dovidio & Gaertner, 1993). The likelihood that a perceiver will attend to a particular stimulus dimension, which will in turn influence the use of either prototype or exemplar processing, depends on several variables, such as, context, motivation, nature of information, and perceiver attributes. Several studies have examined the influence of context and motivation on prototype and exemplar processing, and the overall consensus appears to be that abstractions (prototype-based processing) are frequently utilized at the level of social categories and exemplars at a more individual level (Smith & Zárate, 1992). Also, in-groups are likely to be represented as exemplars and out-groups as prototypes (Smith, 1990). This view is consistent with research indicating that people have differentiated cognitive representations of in-groups and out-groups, that in-group information tends to be articulated into more subunits and are better defined than out-group information (Ostrom, Carpenter, Sedikides, & Li, 1993).

Other researchers have proposed that category-based judgments represent the default mode of person perception, which is especially evident during information overload, or time constraints (Stangor, Lynch, Duan, & Glass, 1992). However, when there is motivation to accurately form impressions of individuals, or when the perceiver encounters a member of a non-stereotyped group, or when encountering in-group members, exemplar-based processes would tend to dominate (Smith, 1990).

Prototypes, Exemplars, and Children's Perception of the Elderly

In order to determine which model would best account for the way children process information about the elderly it is important to briefly examine the development of children's social cognition. Empirical evidence suggests that children's development of person

perception follow a sequential pattern (Barenboim, 1981). Young children describe others in terms of concrete, observable characteristics, after which the use of psychological terms emerge. It is not until late childhood (10-11 years of age) that psychological comparisons are employed in evaluating individuals (Barenboim, 1981).

Although the ability to describe others develops sequentially, the ability to categorize is evidenced at a very young age. Even before children are able to speak, they can proficiently discriminate between men and women's voices, which indicates that categorical perception can be successfully utilized at an early age (Fagot & Leinbach, 1993). Levy and Fivush (1993) demonstrated children's ability to order schematic knowledge about familiar events. The three-year-olds in their study, when asked to describe what happens when they get dressed in the morning, provided a generalized, skeletal account, and not a simple description of a specific experience. In doing so, these children demonstrated an ability to abstract the gist of their everyday routine, which is comprised of general activities that subsumed many subactivities, as well as the ability to generalize common experiences that are shared by others. The empirical evidence supports the prototype model of information processing.

The efficacy of the prototype model has also been bolstered by studies that show that young children lack the sophisticated cognitive ability to consistently utilize exemplar-based information processing (see Martin et al., 1990). When their young respondents were given conflicting category and individuating information, Martin et al. found that the children relied on category-based predictions. The authors posited that children base their inferences on only one piece of information due to their inability to integrate multiple information simultaneously. Children under the age of nine are not able to infer cross-situational consistency of dispositional attributions, and it is not until after about 7-8 years of age that children realize

that others behave in predictable, consistent ways (Rholes & Ruble, 1984). These findings are contrary to the parameters of exemplar-based processing, which require that perceivers select and hold in memory particular attributes of the exemplar, and maintain a cognitive understanding that those attributes carry over from one situation to the next. Given the processing demands, in combination with the lack of cognitive sophistication, it is highly unlikely that exemplar-based processing is used extensively by younger children.

The Influence of Context and Motivation on Perception

Context and motivation are integral factors that influence the way stimulus information is processed. Context and motivation determine what stimulus dimensions are attended to, which in turn influences category salience. The significance of this process is evident when Stangor et al. (1992) instructed their participants to attend to some uninformative physical characteristic (e.g., clothing style), and found that those participants who expected to make a judgment where clothing style was relevant categorized the target in terms of this feature. This demonstrates that an individual's current motivations can significantly influence the salience of particular features of a target, regardless of its informational value, and that this salient feature may subsequently be used to categorize the stimulus.

At any one time an individual in a social environment can be categorized in a variety of ways depending on the perceiver's motivation. For example, race, age, or gender tend to be most salient, and therefore, the most frequently used domains for categorization (Stangor et al., 1992). Smith and Zárate (1992) believe that the categories that are activated may be processed automatically and without conscious awareness, therefore, suggesting that motivation need not be obvious or consciously held in order to influence the way a target is categorized. This phenomenon has been replicated in several studies (e.g., Ford, Stangor, & Duan, 1994;

Herr, 1986; Srull & Wyer, 1979). Stangor and his colleagues posited that a person's features allow the perceiver to make inferences about the underlying dispositions of the target, and that is why social categories are attended to most frequently. People routinely form specific categorizations of target persons, and utilize the easily accessible associations (Stangor et al., 1992). The attention given to a particular attribute depends on the categorization task that is required, and the likelihood that a given characteristic will be used as a basis of judgment depends on the number of competing characteristics that are also activated (Stangor & Lange, 1994). Furthermore, motivation may be situationally determined, and may be affected by the perceiver's relationship to the target category (Brewer, Weber, & Carini, 1995).

It is widely evidenced that certain attributes are more salient to children than others, and therefore, are used more frequently. For example, young children tend to focus on superficial qualities such as age, appearance, possessions, and other such concrete, observable characteristics (Barenboim, 1981; Rholes & Ruble, 1984; Wingard et al., 1982), and according to Mitchell, Wilson, Revicki, and Parker (1985) the salience of the attribute to the perceiver will likely determine the valence of the perception. For instance if physical ability is considered an important attribute, then children will view elderly people less positively than younger adults, however, if they are more influenced by personality traits, then older people will likely be viewed more positively.

Context also plays an important role in determining to which attribute the perceiver attends. For example, if a child's goal is to be read a story, then an older person's physical capabilities are probably lowest on the child's criteria. Therefore, even if the elderly reader walks with a cane, that attribute will not likely be salient in the particular situation. However, if the child's objective is to select a play partner, then the individual's physical attributes would be highly salient. On the whole, person categorization is based on a multitude of

attributes, each of which vary in degree of importance, and the attribute(s) that ends up influencing category salience depends on the context of the interaction and the perceiver's goals and expectations (Smith, 1990).

Other factors that influence the choice of attributes include the expected utility, momentary accessibility, and salience or uniqueness of the characteristic (see Stangor et al., 1992; Taylor et al., 1978). One element that has a subtle but significant influence on the accessibility and salience of a particular feature is priming. A variety of studies carried out with adults have shown how priming can cause naive participants to behave in fairly predictable ways. The effect of this phenomenon on children's cognitive processes, however, has not been widely studied, particularly in the area of attitude assessment.

Effects of Priming on Attitudes

According to the expectancy-value model, attitudes develop from the beliefs people hold about the attitude object (see Ajzen, 1993). Due to common socialization experiences, individuals in a society are equally knowledgeable of the stereotypes (belief sets that describe typical members of a category of people, objects, or ideas) that are identified with a given social group (Devine, 1989b). Ajzen (1993) posited that people can hold a great number of beliefs, but can attend to only a relatively small number at any given moment. It is these salient beliefs that are considered to be the determinants of a person's attitude. According to Stangor and Lange (1994) priming a category label causes other associated parts of the structure to be activated through spreading activation. This activation causes the related attributes to become salient and more accessible, and as a result the perceiver tends to characterize the target person in terms of the primed construct (Ford et al., 1994; Higgins, Bargh, & Lombardi, 1985).

Priming studies have demonstrated that the accessibility or salience of an attribute can subtly yet significantly influence the way perceivers categorize and subsequently behave towards a target. The caveat is that a characteristic (or set of characteristics) is salient only to the extent that it is perceived as relevant to the stimulus person in the particular context (Higgins, Rholes, & Jones, 1977). In one study, however, it was demonstrated that even seemingly insignificant information could be considered relevant. Participants encountered an experimenter who insulted them as they were filling out a questionnaire. When later asked to turn in their completed experimental materials to an available assistant, respondents displayed a tendency to avoid the one assistant whose hair style resembled that of the experimenter who had earlier insulted them (see Smith, 1990). Control participants displayed no such tendencies. The target in the experimental condition was apparently placed in the same category as the original stimulus person, based on an insignificant albeit highly salient feature, as a result of the perceiver's prior experience.

Memory for primed words is not a prerequisite to obtaining priming effects on categorization. In some experiments participants were never aware of the presence of the priming words, much less had any memory of them (see Higgins et al., 1985). Lombardi, Higgins, and Bargh (1987) in fact demonstrated that respondents who were conscious of the priming events were capable of either assimilating (when the target is judged more similarly to the activated construct) or contrasting (when the target is judged less similarly to the activated construct) judgments of the stimulus person, whereas respondents who were not conscious of the priming events inevitably assimilated their judgments to the most accessible primed construct. Therefore, priming is most effective when elaborative processing of the primed stimulus is minimal (Smith, 1990). Devine (1989b) posited that nonconscious priming allows for the dissociation of automatic and controlled processes involved in the perception of

members of a stereotyped group, and because the stereotypes are activated without the respondent's awareness, the effects of stereotype activation can be studied independently of the influences of controlled processes.

The primary methodology that has been employed in priming research consists of presenting participants with a word or group of words as part of one study, followed by an apparently different study where participants are provided with a behavioral description of a target person and asked to form an impression of that individual (Higgins et al., 1985). Nonconscious priming can be achieved by employing this unrelated studies paradigm, that is, by ostensibly presenting the priming event as separate and independent from the main task in which the participant is to later participate (see Srull & Wyer, 1979).

Priming is a useful technique for manipulating construct accessibility while at the same time minimizing the risk of experimental demand effects (Higgins et al., 1985). However, it is this very property of priming that raises some validity concerns in attitude studies. The accidental priming of a construct may cause artifactual responses in participants, which is highly likely given that momentary contextual factors can have considerable impact on how people categorize stimulus information (Higgins et al., 1985). Srull and Wyer (1979) posited that person perception may often be substantially affected by fortuitous events that can cause one concept to be more accessible to the perceiver than others. Therefore, it is very plausible that priming may have a significant influence on children's attitudinal responses, particularly on their judgment of the elderly.

Purpose of the Present Study

In order to gain clearer insight into children's perception of older adults, it is important to have a better understanding of the mechanisms that affect information processing,

and the factors that influence behavior. For example, if a child is faced with the task of evaluating an elderly individual for the first time, what are the cognitive processes that could possibly be involved, and what are the factors that could potentially influence a child to respond either positively or negatively in one situation and not another? Priming studies have successfully demonstrated that perception and categorization processes can be influenced by making certain attributes more accessible and salient than others. However, there has not been similar research done with children, and in particular, in the assessment of children's attitudes toward the elderly. The purpose of this study is to examine the possible influence of priming as a contextual factor that could lead children to respond in a biased fashion, and result in an assessment that may not accurately reflect their perception of the elderly.

There were several theoretical positions and assumptions that served as basis for adapting or developing the instruments that were utilized in this study. One premise is that the majority of children hold preconceived ideas about the aged despite their lack of direct experience with older individuals, and that these attitudes are acquired at a young age from influential social elements. As a result of knowledge and experience with the cultural stereotypes associated with the elderly (generalized and familiar), it was predicted that children would be able to make character judgments based on limited stimulus input, depending on which construct was most salient or accessible. Therefore, stimulus materials were designed with as little detail as possible in order to prevent extraneous variables from influencing children's responses.

Another assumption was that attitudes are multi-dimensional and that they comprise of cognitive, affective, and conative components. Previous studies have demonstrated that children may rate the older stimulus person positively on one dimension and negatively on another depending on the attributes they find pertinent in the particular context (see Jantz et

al., 1977; Thomas & Yamamoto, 1975; Weinberger & Millham, 1975; Wilder & Cooper, 1981). Context may serve to limit the perceiver's frame of reference by making salient particular categories into which the target person may best fit (Cantor & Mischel, 1979). It has been assumed that since categories carry with them characteristics that are already valenced either positively or negatively, that attitudes toward the category object will be automatically and simultaneously acquired (Ajzen, 1993). For example, as a categorical construct, grandparents tend to be associated with positively valenced attributes such as warm, loving, and gentle, and consequently the category "grandparents" would automatically elicit a positive response. Therefore, it was assumed that by presenting (priming) the characteristics associated with either the familiar or generalized elderly, that the corresponding attitude would be elicited. An integration of the priming paradigm into the framework of the prototype and exemplar models would allow researchers to explore further the possible role some contextual factors may have in influencing children's attitudes, particularly as it relates to their perception of the elderly.

The first hypothesis of this study was that priming the generalized and individualized elderly constructs would lead to disparate attitudinal assessments. The temporary accessibility of the primed categories would influence the subsequent evaluation of the target stimulus. Based on the prototype model, it was expected that children primed with the generalized elderly construct (with no additional information provided), would describe the stimulus person in negative terms when they are subsequently asked to describe an elderly person in an ambiguous situation. On the other hand, children primed with the familiar elderly construct were expected to generate positive responses, which would suggest that exemplar-based processing was utilized.

The second hypothesis was that children who were not primed with either negative

(associated with the generalized elderly) or positive (associated with familiar elderly) attributes would display an overall negative perception of old people. This hypothesis was based on Brewer et al.'s (1981) study which has shown that in the absence of meaningful information to circumscribe group membership, the superordinate category serves as the default value for categorization decisions. As discussed earlier, children acquire stereotypes from influential social forces, which is consistent with research indicating that despite a general lack of contact with old people, children exhibit negative stereotypes of the elderly at an early age (Seefeldt et al., 1977; Sheehan, 1978). Although a few studies indicate that some children have positive images of the aged, these individuals tend to be viewed as the exception rather than as an overall representation of this social stratum. The chronic nature and generally negative pattern of stereotypes, for example, that the elderly are infirm, in need of assistance, ugly, grumpy, etc., seem to suggest that children have an abstract and firmly-established image of the generalized older person.

It was further hypothesized that children's responses on the attitude measures would be more negative on the dimension related to the physical constitution of the elderly than on the dimension related to their affective attributes. This hypothesis was based on studies which indicate that, overall, children have positive affective evaluation of the elderly, whereas their attitudes on the dimension dealing with power, position, and activity, tend to be negative (Jantz et al., 1977; Thomas & Yamamoto, 1975). It was, therefore, expected that the children would obtain a pattern of scores consistent with the results of earlier studies; children in the positive prime and grandparent prime (familiar elderly) conditions would be more positive in their evaluation along these two dimensions than the control group children, and significantly more positive than the children in the negative prime and elderly prime (generalized elderly) conditions. In addition, children primed with the generalized elderly construct would

negatively evaluate the elderly for both the affect and physically-descriptive dimensions.

The fourth prediction was that the attributes associated with the related conditions would be activated as a consequence of priming. Marcoen (1979) demonstrated that children associate certain characteristics, such as using a cane, having wrinkles, wearing hair in a bun, and long clothing, significantly more with generalized older women than grandmothers. In addition, it is fairly well established that young children (seven years old or younger) differentiate people in terms of concrete, observable characteristics, such as their appearance, possessions, and behaviors (Barenboim, 1981; Shantz, 1975). Older children, on the other hand, tend to use psychological comparisons to evaluate others. It was, therefore, hypothesized that the attributes children find salient would differ depending on the priming condition to which they were assigned, as well as the age group of the child. Specifically, it was hypothesized that children primed with the generalized elderly construct would tend to focus on the more stereotypic attributes, for example, the cane or the traditional hairstyle of the older person, whereas those children primed with the familiar elderly construct would focus on the positive and non-stereotypic attributes.

Methodological Considerations

One methodological issue that has been raised in previous research is that despite the fact that the majority of the elderly population are women, and that grandmothers may be the only older person children know (Baggett, 1981), certain measures have used only men as stimulus targets. It has been reported that children prefer female stimulus persons to males (Rosenwasser et al., 1983), and that they remember more positive information about elderly women than men (Davidson et al., 1995). Children also perceive female adults as more capable of making them feel happy and good (Mitchell et al., 1985). There is also evidence to

show that children are better at rank-ordering (by age) female than male target persons, and this differential was attributed to children's greater exposure to women during their formative years (see Weinberger, 1979). In contrast, older males tend to be described in less favorable terms than older females (Fillmer, 1982). Therefore, there appears to be compelling reasons to suggest that the use of women-only stimulus persons should moderate potentially negative attitudinal responses that are directly attributable to gender variables.

Furthermore, anecdotal evidence indicates that there are predominantly more experiments that have used only men as stimulus targets (e.g., Bell & Stanfield, 1973; Jantz et al., 1976; Naus, 1973; Reno, 1979; Rosencranz & McNevin, 1969) than there are women-only (as stimuli) research, and this does not include the studies that have utilized the same, or a version of the assessment procedure in question. There is insufficient documentation on how children react to women-only target persons, and such a study would contribute to the body of information available to investigators who may wish to examine single gender stimulus effects. Moreover, due to the additional resources as well as the large number of participants that would have been required to complete a study examining inter-gender stimulus effects, only elderly women were depicted in this inquiry.

Special attention was paid to some of the measurement issues that were raised by several researchers. Green (1981), for example, pointed out that the use of more than one age group in a within-subjects design may induce experimenter effects. In fact, a few studies demonstrated that respondents who were asked to make comparative judgments between young and old adults expressed more extreme negative attitudes toward the elderly than respondents who were prompted to make only isolated judgments about the older group of individuals (Wingard et al., 1982). Therefore, in order to avoid demand characteristics or social desirability response sets, which tend to be elicited when cross-age referents are introduced, no reference was made to young adults in this study.

CHAPTER III

METHOD

Participants

Participants were 150 first-graders who ranged in age from 72 to 96 months (mean of 84.7 months) and 150 fifth-graders with an age range between 117 and 144 months (mean of 121.4 months). The racial composition of the children were as follows: 2.3% African American, 2.7% Asian/Pacific Islander, 83.3% Caucasian, 7.7% Hispanic, and 4% were categorized as "other." The children were from one private and seven public elementary schools in the Chicago suburbs and the socio-economic status of the children ranged from lower to upper middle class. An equal number of male and female participants were asked to participate in this study.

The choice of age groups was based on previous studies demonstrating that fifth graders are cognitively differentiated from first graders. Between the ages of seven and ten, children show a large increase in their use of psychological constructs, for example, they are capable of describing others in terms of covert psychological processes such as thoughts and personality traits (Livesley & Bromley, 1973). Prior to the use of psychological terms children describe others in terms of concrete observable characteristics such as their appearance, possessions, and belongings (Barenboim, 1981), and it is not until the fifth grade that children's use of the potency and activity dimensions become discernible (Jantz et al., 1977). Only in the middle (six-ten years of age) or late (10-12 years of age) childhood can children correctly recognize emotions when judging people who are dissimilar to themselves or

when assessing people in unfamiliar situations (Shantz, 1975). Prior to the fourth grade, children demonstrate limited ability to assign realistic age estimates to drawings of the elderly (Jantz et al., 1977).

Other cognitive differences are also evident between children at the opposite ends of the stages of development. Their trait vocabulary begins to expand when they are between seven to ten years old. The adjectives used by younger children (below seven) tend to be vague and diffuse with strong evaluative components (e.g., nice, good, bad, horrible, etc.). Older children, on the other hand, use terms that are more abstract and precise in meaning, such as “considerate,” “shy,” or “sensible” (see Shantz, 1975). Therefore, the choice of children from these two age groups should reveal differences, if any, in their perception of the elderly. The children’s ages are far enough apart to observe possible differences in their response to the constructs, but not too far apart as to warrant the use of different measuring instruments.

Procedure

The experiment was conducted as two ostensibly separate sessions. The second session was carried out immediately after completion of the first. The children were interviewed one at a time in a room at their school. During session one, the child was randomly assigned to either the control or one of four experimental conditions for this study. Depending on the condition the respondent was then given either a negative prime, positive prime, elderly prime, grandparent prime, or a list of non-applicable words. All the priming conditions involved presenting the participants with a list comprised of five target words and five filler items. The filler items and primes were presented in random order. The five target and filler words for each condition were as follows:

- 1) Negative prime: Complaining, Forgetful, Boring, Lonely, Grumpy.

- 2) Positive prime: Interesting, Cheerful, Warm, Loving, Helpful.
- 3) Elderly prime: Old Woman, Wrinkled Person, Old Person, Old Lady, Gray-Haired Person.
- 4) Grandparent prime: Grandmother, Grandma, Grandparent, Nanna, Granny.
- 5) Control group: Desk, Chair, Lamp, Sofa, Table.
- 6) Filler words: Car, Train, Ship, Bicycle, Truck.

After obtaining the child's name, the experimenter introduced the session to the respondent with the following statement: "We are now going to play a memory game. I am going to read you a list of words, and as I do, I need you to listen carefully. Afterwards I am going to ask you to say the words back to me. Do you have any questions? Okay, here is the list." The children were asked to recall as many words as they could. The words that were left out were subsequently read back to them. They were then asked to identify the target words from several sentences read to them. The experimenter thanked the child and introduced the next segment by explaining that the next few activities were going to be totally different from the ones just completed.

Session two entailed administering the attitude measures described in the following section. Prior to starting session two, the experimenter reassured the child that there were no right or wrong answers and that all the activities that they engaged in during the interview were not activities on which (s)he was graded.

Materials

The instrument used in this inquiry was a composite of measures consisting of tests specifically developed for this study as well as those adapted from previous studies. The first assessment procedure was an Apperception Task. This task comprised of pictures that feature an elderly woman and a child in an ambiguous situation, and participants were asked to

describe, in an open-ended format, what he or she perceived was happening in the picture. The second subtest consisted of the Semantic Differential that was utilized by Jantz and his colleagues (1976) as part of the Children's Attitudes Toward the Elderly (CATE) measure. The third subtest was the Attribute Salience Task, which was made up of a series of pictures that the participant was asked to match, and the choice of pictures indicated which of three attributes she or he found salient. The order of presentation of the tests was counterbalanced.

Apperception Task

Because attitudes can be influenced in unknown ways by the experimental procedure and methodology employed, it has been suggested that alternative measurement approaches, such as those using non-verbal symbols, be explored (McTavish, 1971). Indirect measures that subtly assess attitudes about a person or group would minimize the effects of participants attempting to respond in a manner consistent with the researcher's hypothesis, or of respondents trying to present themselves in a positive light (Green, 1981). Also, Stangor and Lange (1994) argued that free-response measures are better indicators of attitudes, and that they are more highly correlated with measures of both prejudice and behavioral tendencies than are traditional instruments.

Therefore, this test was designed with these suggestions in mind. In order to assess children's attitudes indirectly, two computer-altered, black and white pictures of an elderly woman and a child in an ambiguous situation were used as stimuli. For example, one picture depicted a woman holding a crying child and participants were asked several questions pertaining to the picture (see Appendix B).

Administration

The experimenter introduced the task as follows: “This is a story telling session. I have some pictures that I am going to show you, and for each picture I want you to make up a story. Tell me what happened before and what is happening now. Say what the people are feeling and thinking and how the story will come out. You can make up any kind of story you like. Do you understand? Okay, here is the first picture.” The preceding instruction is an adaptation of the instructions described by Bellak (1986), for administering the Thematic Apperception Test (TAT) and Children’s Apperception Test (CAT) to children. Prior to the actual test, the younger participants were given a practice session that allowed the child to construct a story based on a picture of two cartoon animals interacting. This segment was tape recorded in order to preserve the responses verbatim, and was later transcribed for analysis. The children were allowed sufficient time to respond, but after about 15 seconds without a response the follow-up question “Can you tell me anything else?” was asked, and afterwards the examiner proceeded to the following questions: 1) “In your story what is the child doing?”; 2) Why is she (activity from previous question)?”; 3) What do you think happened right before this picture?”; 4) What is happening now?”; 5) Tell me about the grown up in your story”; 6) In your story what is the grown up doing?”; and 7) How do you think the grown up is feeling and why?” These questions were posed to all participants regardless of whether or not they were previously addressed. No reference was made to the age of the adult, and the label “old” or “elderly” was never used.

Scoring

The main purpose of this task was to determine the participant’s perception of the role of the adult. Therefore, the children’s responses were coded under several categories in terms of the reasons given for the target child’s affect and the adult’s response and affect vis-à-vis

the child. Specifically, the categories used to code the responses were: a) the overall theme of the story b) the adult's affective response, that is whether it is sympathetic, or unsympathetic; c) the adult's action or role, for example, if the adult hugs the child or spansks the child; d) description of the adult, for example, loving or mean; e) the main reason for the target child's emotion, that is, if the adult was perceived as directly causing the affect, or if an unrelated reason was provided, for example, accident or physical discomfort; f) the adult's efficacy, that is whether the adult was successful or unsuccessful at comforting the child; g) the presence or absence of an age description of the adult; and h) the adult's relationship to the child. Once the responses for each participant were categorized, scores were transposed and combined for sub-categories a to d to obtain a sub-total score for the Apperception Task, and a frequency count was made for sub-categories e to h.

Semantic Differential

The Semantic Differential is a widely utilized instrument for measuring attitudes, and one version in particular was designed and tested for use with children aged three to eleven. The Children's Attitudes Toward the Elderly (CATE) developed by Jantz and his colleagues (1976) contains the Semantic Differential as a subscale, and it consists of 10 bi-polar adjectives rated on a five-point scale. Jantz et al. reported that the younger children indicated a consistent understanding of adjectives and response choice. The Semantic Differential for this study was adapted from the CATE. The adjectives good-bad, happy-sad, right-wrong, wonderful-terrible, pretty-ugly, friendly-unfriendly, healthy-sick, were retained, and three additional bi-polar adjectives, weak-strong, interesting-boring and kind-mean were added. Prior to final selection of the adjective pairs, first grade teachers were asked to rate a list of 76 words in terms of their ease or difficulty for first graders, and the 10 bi-polar adjectives utilized in this study were rated as simple or very simple.

Administration and Scoring

The Semantic Differential was administered to participants individually. Each participant was shown a picture of an elderly woman, and was asked to rate the adult using one set of adjectives at a time (see Appendix B). For example, while pointing to the adult in the picture the examiner asked the child, "Is this person good, bad, or in-between?" If the child indicated a choice that was not neutral the examiner then proceeded to determine the degree of intensity of response by asking, "Is this person a little good, good, or very good?" or "Is this person a little bad, bad, or very bad?" The examiner alternated the order of presentation of positive and negative adjectives. For scoring, the numbers on the seven-point scale were transposed to scores that ranged from +3 to -3 which reflected the valence of the adjectives.

Attribute Salience Task

The purpose of this task was to identify which of three depicted attributes were salient to children. According to Marcoen (1979) there are certain characteristics that tend to be associated more with generalized old women than grandmothers. For example, deficit characteristics associated with old women are canes and wrinkles; and old age life style characteristics associated with the generalized old woman are wearing hair in a bun, using a hat or small cap, and wearing long clothes.

The characteristics that were manipulated in this study were the older person's affect, physical attributes, and appearance. Positive and negative affect were represented by a smile and a frown respectively; positive and negative physical attributes were symbolized by the absence of a cane (denoting physical ability) and the presence of a cane (denoting physical disability); and the appearance of the contemporary older woman (grandmother) and traditional older woman (generalized elderly) was symbolized by the woman wearing short hair or a bun

respectively (see Appendix B).

Each set of pictures was comprised of the target picture and three choices, and the respondent was asked to select the one (s)he thought matched best with the target. Each of the choices differed or matched the target on at least one attribute. For example, in one set the target was featured with a smile, without a cane, and with her hair short. The three choices were as follows: 1) a frowning woman with a cane, and short hair; 2) a frowning woman without a cane, and with a bun; and 3) a smiling woman with a cane and a bun. The selection of any one of the choices, in this example, served as an indication of the positive feature the participant found salient. Based on the possible permutations, 16 sets of pictures were created, however, only 10 were used due to information redundancy. All 10 pictures were presented in random order to each child.

Administration and Scoring

The experimenter presented this task to the child as a “matching game” and the objective was to select the picture that best matched the target picture. The experimenter reassured the child that there were no right or wrong answers and that this task was not an activity on which (s)he was graded. The 10 sets of pictures were presented in randomized order, and the experimenter took careful note of the particular set being presented and the respondent’s choice. The experimenter presented the pictures, one set at a time, to the children with the following instruction: “Select the picture that you think best matches this picture.” While relating this instruction the experimenter pointed to the target picture. Scoring was based on the frequency of each chosen attribute.

CHAPTER IV

RESULTS

Apperception Task Results

The purpose of this task was to examine children's underlying perception of the scenario presented to them. Therefore, responses were coded in terms of the overall theme of the story, the adult's affective response, the adult's action or role, description of the adult, the reasons for the target child's emotional state, the adult's efficacy, the presence or absence of an age description of the adult, and the adult's relationship to the child.

Inter-rater reliability for the coding procedure was 85%. Scores for the first four categories (overall theme of the story, adult's affective response, adult's action or role, and description of the adult) were combined to form an overall score for the Apperception Task. Scores were transposed so that positive scores indicate positive perception and negative scores, negative perception. Analysis of variance revealed grade $F(1, 280) = 3.962, p < .05$ and priming condition $F(4, 280) = 33.9, p < .01$ main effects. Fifth graders' mean scores were significantly more positive than first graders on the Apperception Task. Follow-up Scheffe analysis on priming condition (see Table 1) showed that children in the Negative Prime condition responded significantly more negatively than children in the Positive Prime condition and Grandparent Prime condition; children in the Elderly Prime condition were significantly more negative than children in the Positive Prime, and Grandparent Prime conditions; and finally children in the Control Group were significantly more negative than the participants who were given the Positive Prime, and Grandparent Prime. The scores were in the predicted

direction, that is, children in the Grandparent and Positive Prime conditions scored higher, indicating that their responses were more positive than children in the Elderly Prime, Negative Prime, and Control Group (see Figure 1).

Table 1.--Scheffé Results for Apperception Sub-Total, by Priming Condition

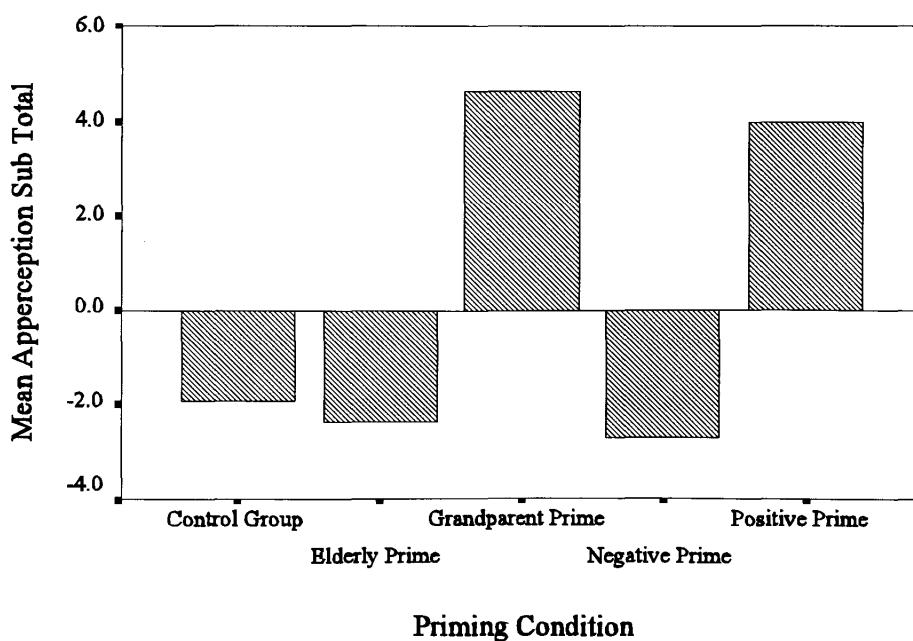
Priming Condition	EP	NP	GP	PP	CG
EP					
NP	-.35				
GP	6.98*	7.33*			
PP	6.30*	6.65*	-.68		
CG	.43	.78	-6.55*	-5.87*	

Note. Values represent mean differences.

* $p < .01$.

Figure 1

Bar Chart for Apperception Sub-Total



In order to determine the relationship in children's responses between the two pictures presented in the Apperception Task, Pearson's Product Moment Correlation Coefficients were calculated for the sub-categories that comprised the Apperception Sub-Total score (see Table 2). The results indicate that the Sub-Total scores for the two pictures were significantly correlated. In other words, there was a significant relationship in the way children responded to the first picture presented to them and to the second picture they were asked to describe.

Table 2.--Correlations for Sub-Categories Comprising the Apperception Sub-Total Score

Apperception Sub-Total	AA1	RA1	D1	OT1	ST1	AA2	RA2	D2	OT2	ST2
Adult's Affect 1	1.000									
Role of Adult 1	.320**	1.000								
Description 1	.163**	.293**	1.000							
Overall Theme 1	.459**	.589**	.484**	1.000						
Sub Total 1	.568**	.758**	.670**	.910**	1.000					
Adult's Affect 2	.019	.059	.065	.124*	.103*	1.000				
Role of Adult 2	.168**	.185**	.089	.203**	.217**	.319**	1.000			
Description 2	.034	.068	.187**	.099*	.134*	.181**	.238**	1.000		
Overall Theme 2	.092	.147**	.028	.218**	.179**	.480**	.578**	.372**	1.000	
Sub Total 2	.114*	.165**	.118*	.229**	.222**	.609**	.748**	.621**	.888**	1.000

Note. Values represent correlations in children's responses (as reflected in the sub-categories that comprised the Apperception Sub-Total Score) between the two pictures on the Apperception Task.

* $p < .01$. ** $p < .01$.

For the second coding category, (reason for child's affect) the scores were subcategorized into Accident/Physical Discomfort, Event/Incident, and Adult-Related Cause, with a score of one indicating that the particular reason was selected. For Accident/Physical Discomfort, Analysis of Variance (grade by gender by priming condition) revealed a significant difference in only the priming condition, $F(4, 280) = 4.69$, $p < .01$. See Table 3

for a distribution of mean scores. Post hoc Scheffe analysis showed that the differences were between the Positive Prime and Control Group as well as the Grandparent Prime and Control Group (see Table 4). Children in the Positive Prime and Grandparent Prime conditions were more inclined to cite accident or physical discomfort as the cause of the child's affect than children in the control group.

Table 3.--Means for Accident/Physical Discomfort, by Priming Condition

Priming Condition	Mean
NP	.667
PP	.950
EP	.717
GP	.983
CG	.550

Table 4.--Scheffe Results for Accident/Physical Discomfort, by Priming Condition

Priming Condition	EP	NP	GP	PP	CG
EP					
NP	-.05				
GP	.27	.32			
PP	.23	.28	-.03		
CG	-.17	-.12	-.43*	-.40*	

Note. Values represent mean differences.

* $p < .05$

Under the same affect category, ANOVA (grade by gender by priming condition) conducted on the Adult-Related Cause subcategory (i.e., the adult obstructed the goals, wants,

or desires of the child) once again revealed a significant difference in only the priming condition $F(4, 280) = 6.045, p < .01$. The mean score distribution is presented in the diagonal of Table 5. Post hoc Scheffe analysis showed that the differences were between the Negative Prime and Grandparent Prime, the Elderly Prime and Grandparent Prime, and the Grandparent Prime and Control Group (see Table 5). Therefore, children in the Negative Prime, Elderly Prime, and Control Group were significantly more likely to attribute the child's affect to adult-related causes than children in the Grandparent Prime condition. Analysis carried out on the Event/Incident subcategory revealed no significant differences.

Table 5.--Scheffe Results for Adult-Related Cause, by Priming Condition

Priming Condition	EP	NP	GP	PP	CG
EP	.72				
NP	.03	.75			
GP	-.40*	-.43*	.32		
PP	-.32	-.35	.08	.40	
CG	.05	.02	.45*	.37	.77

Note. Values on the diagonal represent means. All others represent mean differences.

* $p < .05$

For the category relating to the adult's efficacy (i.e., whether the adult was successful or unsuccessful as comforter or causal agent, or whether the adult was perceived as ineffective), contingency analyses revealed significant differences in the way children depicted the adult depending on the priming condition they were in $\chi^2(20) = 51.14, p < .01$. Post hoc analyses revealed that children in the Grandparent Prime condition were more likely to depict the adult as a successful comforter ($p < .01$) and were significantly less likely to portray the

adult as a successful causal agent ($p < .01$), or as ineffective ($p < .01$).

The next category involves any age-related description (e.g., “old” or mention of a specific age) the children made of the adult. Analysis of variance (grade by gender by priming condition) revealed a main effect for grade $F(1, 280) = 5.88, p < .01$. Children in the first grade were significantly less likely to spontaneously use an age-related description of the adult than were fifth grade children.

In the last category, children’s use of terms to describe the adult’s relationship to the depicted child was coded in the following sub-categories a) Relative Appropriate (e.g., grandparent or grandaunt), b) Relative Inappropriate (e.g., mother or father), c) Non-Relative Appropriate (e.g., babysitter, nurse, etc.), and d) Non-Relative Inappropriate (e.g., girl or man). Separate ANOVAs (grade by gender by priming condition) conducted on each of the subcategories revealed that children were influenced by the priming condition when using a Relative Appropriate term $F(4, 280) = 8.47, p < .01$. Scheffe analysis showed that children in the Grandparent Prime condition were significantly more likely than children in the Control Group to use a Relative Appropriate term to describe the adult ($p < .01$). Analysis of variance on the Relative Inappropriate subcategory had grade $F(1, 280) = 7.68, p < .01$ and gender $F(1, 280) = 3.00, p < .01$ main effects. Children in the first grade were significantly more likely than their fifth grade counterparts to use Relative Inappropriate terms, and boys were more likely than girls to use those same categorical terms to describe the adult. For the Non-Relative Appropriate category, grade main effects were found $F(1, 280) = 3.203, p < .01$. Fifth graders were significantly more likely to use Non-Relative Appropriate terms to describe the adults than were first graders. None of the children used terms that could be categorized as Non-Relative Inappropriate.

Semantic Differential Results

A factor analysis was initially performed on the Semantic Differential data using the principal component method, and factors with eigenvalues greater than or equal to one were retained. Two factors, Trait/Personality (kind-mean, happy-sad, right-wrong, wonderful-terrible, pretty-ugly, friendly-unfriendly, good-bad, and interesting-boring) and Physical Disposition (healthy-sick and weak-strong), were identified. Factor loadings for the Trait-Personality items were .634, .440, .569, .692, .677, .707, .697, and .675 respectively, and .586 and .577 for the Physical Disposition items. In Thomas and Yamamoto's (1975) study, they identified three factors that they labeled "Evaluation," "Affect," and "Activity-Potency" after administering the Semantic Differential to their group of participants who ranged in age from 11 to 17 years. Marks et al. (1985) in their study used two dimensions of the Semantic Differential that were identified as "Evaluative," and "Potency" factors to assess the attitudes of eight to ten year-old children. Therefore, the factors identified in the present study appears to be consistent with those of earlier research.

The scores for each respondent, on the eight items that made up the Trait-Personality factor, were summed and averaged to obtain a mean score for the first factor. Similarly, scores for the two items that constituted the Physical Disposition factor were summed and averaged to derive a score for the second factor. These scores were used in the subsequent analyses. Once again, the scores were transposed from the original seven-point scale to a score that reflected a positive three to negative three range, where positive scores indicate positive affect and negative scores, negative affect.

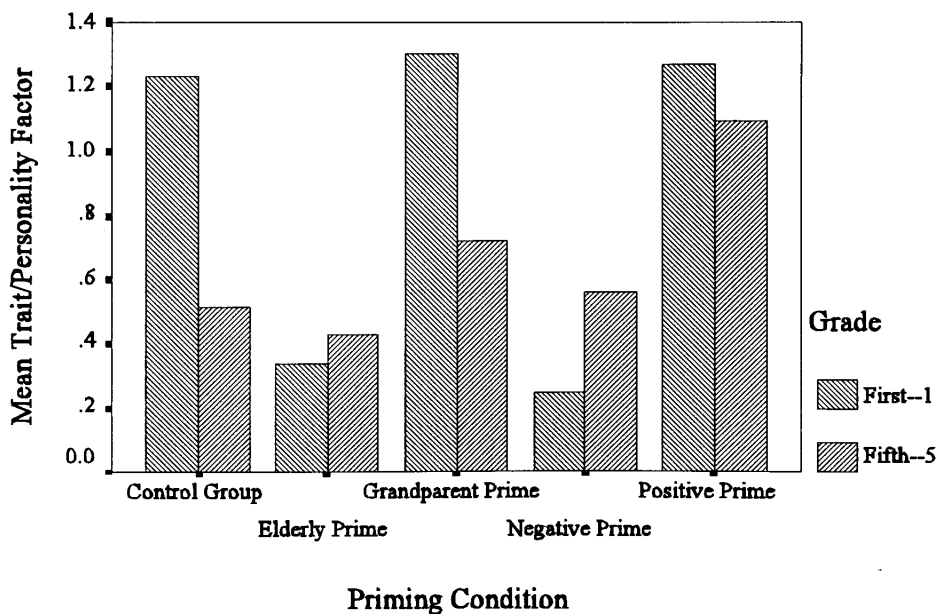
A three-way analysis of variance (priming condition by grade by gender) was conducted on the two factors. The ANOVA results for the Trait/Personality factor revealed a priming condition by grade interaction effect $F(4, 280) = 4.171$, $p < .01$, and a main effect for

gender $F(1, 280) = 5.894, p < .05$. Post-hoc Scheffe analysis on the interaction effect revealed that, for the first graders, there were significant differences in response between the Negative Prime and Positive Prime, Negative Prime and Grandparent Prime, Negative Prime and Control Group, Elderly Prime and Positive Prime, Elderly Prime and Grandparent Prime, and Elderly Prime and Control Group (see Table 6). For the fifth graders the only significant difference was between the Positive Prime and Elderly Prime conditions (see Figure 2). Children given the Positive Prime were significantly more positive than children in the Elderly Prime condition in their assessment of the elderly. An examination of the gender main effect revealed that girls (Mean = .887), were significantly more positive than boys (Mean = .657).

In order to determine if the differences in the first and fifth grade children's mean responses in the Trait/Personality factor (for each of the priming conditions) were significant, ANOVAs were conducted (see the diagonal of Table 6 for means). The results indicate that in

Figure 2

Bar Chart for Trait/Personality Factor



the Grandparent Prime condition, the first graders' responses were more positive than those of the fifth graders $F(1, 58) = 6.570, p < .05$. Similarly, first grade children in the Control Group were significantly more positive than their older cohorts $F(1, 58) = 12.945, p < .01$ (see Table 7 for the remaining ANOVA results).

Table 6.--Scheffe Results for Trait/Personality Factor, by Priming Condition and Grade

First Grade					
Priming Condition	EP	NP	GP	PP	CG
EP	.34				
NP	-.09	.25			
GP	.96**	1.05**	1.30		
PP	.92**	1.02**	-.03	1.27	
CG	.89**	.98**	-.07	-.04	1.23

Fifth Grade					
Priming Condition	EP	NP	GP	PP	CG
EP	.43				
NP	.13	.56			
GP	.30	.16	.72		
PP	.67*	.53	.37	1.10	
CG	.09	-.05	-.21	-.58	.52

Note. Values on the diagonal represent means. All others represent mean differences.

* $p < .05$. ** $p < .01$.

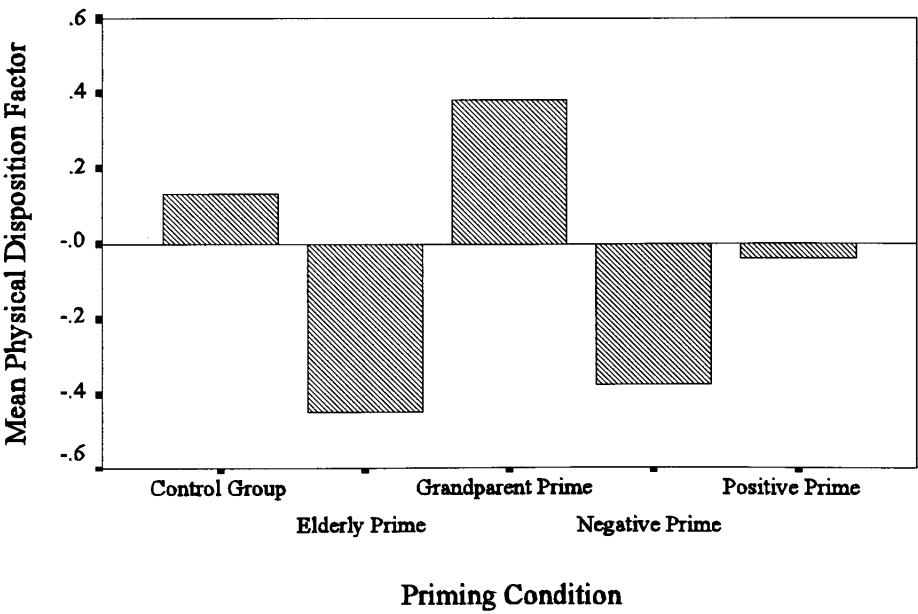
Table 7.--ANOVA Results for Trait Personality Factor, Grade by Priming Condition

Priming Condition	F-Value	Significance
NP	2.095	>.05
PP	.581	>.05
EP	.185	>.05
GP	6.570	<.05
CG	12.945	<.01

Analysis of variance conducted on the Physical Disposition factor revealed a Priming Condition main effect $F(4, 280) = 4.247, p < .01$, and post-hoc Scheffe analysis showed that the differences were between the Negative Prime and Grandparent Prime ($p < .05$), and the Elderly Prime and Grandparent Prime ($p < .05$) (see Figure 3). Specifically, children in the Grandparent Prime condition were significantly more positive in their assessment of the elderly

Figure 3

Bar Chart for Physical Disposition Factor



on the Physical Disposition factor than were children in the Negative and Elderly prime conditions.

In order to examine differences in children's ratings of the elderly in terms of trait/personality attributes and physical disposition, a paired t-test was performed. The means indicate that the children scored higher (were more positive) on the Trait/Personality Factor (.772) than on the Physical Disposition Factor (-.070), $t(299) = 11.889$, $p < .01$.

Attribute Salience Results

In order to determine if attributes were selected due to priming condition, grade, or gender of the participants, individual contingency analyses were conducted on the Attribute Salience sub-test for each picture set. Grade was the significant variable on all except one picture set, P11, $\chi^2(2) = 15.080$, $p < .01$; P12, $\chi^2(2) = 12.505$, $p < .01$; P13, $\chi^2(2) = 8.077$, $p < .05$; P14, $\chi^2(2) = 27.590$, $p < .01$; P21, $\chi^2(2) = 6.265$, $p < .05$; N11, $\chi^2(2) = 19.123$, $p < .01$; N12, $\chi^2(2) = 14.308$, $p < .01$; N13, $\chi^2(2) = 13.506$, $p < .01$; N14, $\chi^2(2) = 8.280$, $p < .05$. Upon examination of the data, a pattern emerged. For this task the children were asked to pick the picture that they thought best matched the target picture. The choices varied on appearance (hair style), affect (smile or frown), and ability (cane or no cane). The first graders were more likely to pick the target picture based on hair style and the fifth graders tended to base their choice on affect.

Table 8.--Contingency Analysis Results for Attribute Salience Task

	First Grade			Fifth Grade			Significance
	Affect	Physical	Hair	Affect	Physical	Hair	
P11	32.0	22.0	46.0	53.3	21.3	25.3	<.01
P12	28.0	26.7	45.3	47.3	15.3	37.3	<.01
P13	28.0	20.7	51.3	45.3	16.0	38.7	<.01
P14	43.3	26.0	30.7	26.7	12.0	61.3	<.01
P21	18.0	44.7	37.3	27.3	47.3	25.3	<.05
N11	26.0	25.3	48.7	51.3	20.0	28.7	<.01
N12	21.3	0.7	48.0	15.3	0.0	32.0	<.01
N13	30.7	22.0	47.3	51.3	18.0	30.7	<.01
N14	29.3	22.7	48.0	47.3	15.3	37.3	<.01
N21	38.7	42.0	19.3	41.3	39.3	19.3	>.05

Note. Values represent percentages for column category within each row variable. For example, 46% of all the first graders made their selection based on hairstyle (for item P11), whereas only 25% of all the fifth graders based their choice on hairstyle.

Table 9.--Correlations for Apperception Task and Semantic Differential Results

	SD F1	SD F2	AA	AR	DA	OTS	AST
SD F1	1.000						
SD F2	.466**	1.000					
Adult's Affect	.140*	-.005	1.000				
Adult's Role	.309**	.091	.391**	1.000			
Description of Adult	.244**	.065	.202**	.290**	1.000		
Overall Theme of Story	.319**	.101	.517**	.633**	.412**	1.000	
Apperception Sub-Total	.353**	.096	.623**	.785**	.641**	.905**	1.000

Note. The Apperception Task results consisted of the sub-categories used to obtain the Apperception Sub-Total score.

* $p < .05$. ** $p < .01$.

In order to determine the relationship between the two main measures (the Apperception Task and the Semantic Differential) utilized in this study, Pearson's Product Moment Correlation Coefficient analyses were performed. The results reveal that the Trait/Personality factor of the Semantic Differential is significantly correlated to the Apperception Task Sub-Total score as well as the individual sub-categories that comprised the overall score (see Table 9). This outcome, that is, only the Trait/Personality dimension (and not the Physical Disposition factor) of the Semantic Differential correlates with the Apperception Task, can be attributed to the common evaluative element that the components of these two measures assess. None of the items that comprised the Apperception Task addressed the physical attributes or ability of the depicted adults. Therefore, criterion validity has been established for the Apperception Task based on the significant relationship of the Apperception Task to the widely-utilized Semantic Differential measure.

CHAPTER V

DISCUSSION

Attitude research on the elderly indicates that children's perception of older adults tend to be negative. However, the results of a handful of studies contradict this finding. Priming studies have shown that participants can be made to behave in predictable ways by making relevant constructs salient. These constructs are subsequently used to categorize the target. Such studies, however, have not been carried out with children. The purpose of the present research is to determine what role, if any, priming has in influencing children's attitudes toward the elderly.

Several hypotheses were tested for this study. The first is that priming the generalized (Negative Prime and Elderly Prime) and familiar (Positive Prime and Grandparent Prime) elderly constructs would lead to disparate attitudinal assessments. Specifically, children primed with the positive and grandparent primes would be more positive in their judgment of the elderly than children primed with the negative and elderly primes. Also, the older group of children would have more defined negative attitudes than the younger group. The second hypothesis is that the control group children would display an overall negative perception of the aged. The third hypothesis predicts that children's attitude would be more negative on the dimension related to the physical constitution of the elderly than on the dimension related to their affective attributes. The fourth hypothesis is that stereotypes would be activated as a consequence of priming, and as a result, the related attributes would become salient. It is also hypothesized that concrete, observable characteristics would be utilized by the younger group

of children whereas the older children would tend to use psychological comparisons in their evaluation of the elderly.

Hypothesis 1

The main hypothesis for this study was that priming the generalized elderly construct would lead to negative attitudinal assessments, and that priming the individualized elderly construct would influence participants to provide an overall positive attitudinal response. The results obtained from the Apperception Task support this hypothesis. Children in the Negative Prime and Elderly Prime groups obtained negative scores, indicating negative attitudes, and children in the Positive Prime and Grandparent Prime conditions obtained positive scores, which indicate positive perception of the elderly.

The Semantic Differential results, however, were not as straight forward. For the Trait/Personality factor, the children's responses in the various conditions differed depending on their age group. The first graders were clearly more influenced by the priming conditions than were the fifth graders; the younger children in the Positive Prime and Grandparent Prime conditions were significantly more positive than children in the generalized elderly conditions. The responses of the fifth graders, although in a similar direction, were less defined; the only two conditions that were significantly different from each other were the Positive Prime and Elderly Prime. This result is opposite to what was hypothesized, and that is, that the older group of children would have more defined negative attitudes than the younger group.

There are two possible reasons for this outcome. The first is that the attitudes of fifth graders toward old people in general are not as defined as those of first graders. However, studies such as the one conducted by Martin et al., (1990) have shown that stereotypic judgments of older children are more extreme than those of younger children. Given that

cumulative exposure to stereotypes of the elderly should only solidify these constructs over time, the results are counterintuitive.

The second and more plausible reason is that contrast effects occurred with the older children. According to Lombardi and her colleagues (1987), different cognitive processes are involved depending on whether a perceiver is consciously or unconsciously processing information. They demonstrated that when respondents were aware of the priming event, they showed contrast effects (the target is judged as different from the activated construct) whereas respondents who were not aware of the priming event showed assimilation effects (the target is judged as similar to the activated construct). Some of the first graders and the majority of the fifth graders, at the end of the interview, were asked what they thought the purpose of the activities were, and several fifth graders correctly identified that it was to see “what I think about old people.” When asked at what point in the study they developed this awareness, several of the fifth graders indicated that it was when they read the consent forms that they had brought home to their parents. None of the first graders who was asked was able to provide relevant answers; instead, they provided answers such as “it was for fun.”

Hypothesis 2

The second hypothesis is that due to socialization and environmental effects, children possess latent negative attitudes toward the elderly. There is support for this hypothesis in the results of the Apperception Task. The responses of children in the Control Group were similar to those of children in the Negative Prime and Elderly Prime groups, which is in the predicted direction of the hypothesis. The results of the Semantic Differential, however, is in the opposite direction. The responses of children in the Control Group were more similar to those of children in the familiar elderly conditions than children primed with the generalized elderly

construct. The differential response of the Control Group children, as reflected in the Apperception Task and Semantic Differential subscales, can be explained by the findings of earlier studies.

Several researchers have suggested that when particular stimulus persons are used, there is a tendency that their individuating attributes become more salient, which consequently elicits positive ratings (Branco & Williamson, 1982; Green, 1981; Reno, 1979; Weinberger & Millham, 1975). In the Semantic Differential, a large, computer-altered, head-shot picture of an older woman was used as stimulus, whereas in the Apperception Task an older woman was depicted together with a child. In Wingard et al.'s study (1982), they found that participants who were induced to make comparative judgments of old and young people expressed more extreme negative attitudes than those who were asked to rate only old people. Although the children in this study were not asked to make comparative judgments, it may be that juxtaposing the image of young and old individuals caused age to become a salient variable. As a result, the age cue might have influenced children to respond more negatively (as in the Apperception Task) than they would if age were not salient (as in the Semantic Differential).

Hypothesis 3

To test the third hypothesis, that children would rate older adults more negatively on the dimension related to physical constitution than on the dimension related to trait/personality, the two factors on the Semantic Differential were compared. The result of the analysis indicate that the children consistently rated the older person significantly more negatively on the physical constitution factor than on the trait/personality dimension. This is consistent with Jantz et al.'s (1977) findings that children's judgments about the elderly were positive when they communicated information in affective terms, and negative when physically-descriptive or behavioral terms were used.

Hypothesis 4

The fourth hypothesis is that priming would cause the activation and salience of the relevant attributes; that younger children would rely on concrete, observable characteristics in their assessment of the elderly; and that older children would tend to use more psychological comparisons in judging old people.

According to Marcoen (1979), children associate certain characteristics more with the generalized elderly than with the familiar elderly and vice versa. For example, characteristics associated with the generalized elderly are canes, wrinkles, traditional clothing and traditional appearance. Consequently, for this study, it was hypothesized that a child primed with the generalized elderly construct would find a cane, negative affect, and traditional appearance (wearing the hair in a bun) salient. In other words, the activation of the generalized elderly construct would cause children in the Elderly Prime and Negative Prime conditions to match the pictures based on the negative attributes (i.e., cane, frown, and bun) depicted, and that children in the Grandparent Prime and Positive Prime conditions would make their selection based on the positive attributes (i.e., absence of cane, smile, and short hair).

The results of analyses on the Salience Task reveal that children's selection of pictures was not influenced by the priming condition to which they were assigned. However, the pattern that emerged showed that first graders tended to base their choice on hairstyle of the target picture, whereas fifth graders were more likely to select pictures based on affect. This phenomenon is consistent with the findings that young children focus on concrete, observable characteristics, and it is not until age 10 or older that children use psychological comparisons in evaluating others (Barenboim, 1981). Other research has shown that children aged between 10 and 11 are significantly more accurate in their perception of affect, and changes in affect, than younger children (Shantz, 1975). The results of the present study is consistent with the literature.

Gender Differences

It was not expected that gender would be a major variable in affecting children's responses in the priming conditions, and therefore, no specific hypotheses were made. There were, however, two gender differences that may be worth mentioning. The Apperception Task revealed that boys were significantly more likely than girls to use an Inappropriate Relative term (e.g., mother or father) to describe the relationship between the depicted adult and child. There has been research suggesting that language development tends to occur earlier in girls and that girls develop their vocabulary more rapidly than boys (see Rebok, 1987), however, it is unclear what role differential language development had in causing boys to use inappropriate relationship terms with higher frequency than their female cohorts in this particular study.

In the Semantic Differential, and in particular on the Trait/Personality factor, girls rated the older adult significantly higher than did the boys. Mitchell et al. (1985) in their study found that girls obtained a higher mean value than boys when it comes to their perception of the elderly on the "affective relations" dimension. Zandi, Mirle, and Jarvis (1990), in their cross-cultural study, found that boys on the whole tended to be more negative than girls in their perception of the elderly and about being old. Also, boys in general were more "evaluative, opinionated, and judgmental" about old people. Therefore, the gender differences observed in the present study is consistent with what some researchers have found when it comes to differences in the way boys and girls perceive the elderly.

Age-Related Differences

There were several age-related differences in the way children responded, and this was reflected in the measures used in this study. In the Apperception Task it was demonstrated

that fifth graders were more likely to spontaneously use age to describe the stimuli than were first graders. They would either use the word “old” or mention a specific age, for example, “She is 75 years old” in their description of the depicted adults. Secondly, when it comes to identifying the relationship between the depicted child and adult, first graders were more likely to use a Relative Inappropriate term (e.g., mother or father) than the fifth graders were. On the other hand, fifth graders were more likely to use a Non-Relative Appropriate term (e.g., babysitter or teacher) than first graders.

Another age-related difference was also revealed on the Apperception Task. The results suggest that, overall, fifth graders responded significantly more positively in their judgment of the older adult than did the first graders. This is contrary to the findings of past research. However, as discussed earlier, there is a high probability that the fifth graders were sensitized to the purpose of the study, which likely influenced them to respond more positively than they otherwise would in the absence of a response bias. The fifth graders’ approximation of the research question very likely produced a social desirability effect.

Results of the Semantic Differential also revealed age-related differences in judgment. As reflected in the Trait/Personality factor analysis, the first graders were more influenced by the priming conditions than the fifth graders were; the younger children in the familiar elderly conditions were significantly more positive than children in the generalized elderly conditions. The responses of the fifth graders, although in a similar direction, were less defined; the only two conditions that were significantly different from each other were the Positive Prime and Elderly Prime groups. Additional analyses revealed that fifth grade children in the Control and Grandparent Prime conditions were significantly less positive than the first grade children in those same conditions. The ratings of the children in the Control Group are consistent with previous research, (e.g., Martin et al., 1990), which has shown that stereotypic judgments of

older children are more extreme than those of younger children.

The fifth graders' performance on the two measures, however, appear to contradict each other, particularly when social desirability is used to explain the results. Here is the problem. Fifth graders' ratings on the Semantic Differential were less positive in the familiar elderly conditions and less negative in the generalized elderly conditions in comparison to the first graders. The fifth graders, on the other hand, were more positive than their younger cohorts in their perception of the elderly on the Apperception Task. And so the question is, if fifth graders' responses can be attributed to a social desirability response set, then why is their perception of the adult on the Semantic Differential less positive than the perception of the first graders? In other words, the fifth graders' responses should be consistently positive on both measures if they were actually trying to appear socially desirable.

As discussed earlier, contrast effects likely occurred with the older children (because of their awareness of the research theme, i.e., to assess their attitudes toward the elderly). As previously described, the Semantic Differential consisted of 10 bipolar adjectives, and the children were asked to give a response based on the choices presented to them. It is, therefore, much easier for this more developmentally-advanced group of children to adjust their responses accordingly, that is, contrast or assimilate the primed construct. Simultaneous, on-line cognitive processing of the options, and a subsequent choice of a moderate response was much easier to accomplish in the Semantic Differential than in the Apperception Task.

For the Apperception Task the children were given two pictures and asked to make up stories for them. This is more of an indirect approach at assessing children's attitudes as well as their susceptibility to priming. Although the fifth graders were more positive in their judgment of the elderly, they were still significantly influenced by the priming conditions to which they were assigned, which clearly indicates that contrast effects did not occur. This

outcome can be attributed to the complex cognitive processing that is required to contrast the primed constructs when the child is simultaneously trying to make up a story.

Therefore, the differential response of the fifth graders on the two measures was likely an artifact of the instruments utilized. This result reinforces the point that a few researchers (e.g., Green, 1981; Mc Tavish, 1971) have made about the need to explore the use of indirect measures in attitude assessment.

General Discussion

One of the significant findings of this study was that children's attitudes could be influenced by priming, and that their ratings of the older person could differ depending on whether the generalized or familiar elderly construct was made salient. This outcome reinforces the point that several researchers have emphasized, and that is, the elderly should not be treated as members of a homogeneous population. However, treating a group of people who share similar outward characteristics as a single entity is part of a cognitively-driven, information processing strategy that allows perceivers to evaluate, predict, and determine causality, on the basis of general expectations about a category (Cantor & Mischel, 1979).

It has long been demonstrated that category membership alone, even on some arbitrarily-defined dimension, can significantly influence the way perceivers process information, which subsequently impacts on the way a group member is evaluated (Brewer & Weber, 1994). Consequently, it is important to be able to better understand and explain the way information is being used to formulate judgment and perception of people and groups.

The integration of the prototype and exemplar models, as discussed in the introduction, is one important approach at promoting a better understanding of the dynamics involved in individual versus group information processing, and may be used to explain some of the

results obtained in this study. For instance, several researchers have pointed out that there should be a distinction made between the generalized and familiar elderly (Brubaker & Powers, 1976; Dobrosky & Bishop, 1986; Hickey et al., 1978). In addition, Brewer and her colleagues (1981) have proposed that different cognitive processes may be involved depending on whether a social group or an individual from that group is being evaluated. The prototype and exemplar models provide a theoretical basis for such assertions.

Experts have proposed that prototype-based processing is frequently utilized at the level of social categories and exemplars at a more individual level (Smith & Zárate, 1992). Category-based judgments represent the default mode of person perception, and this is evidenced during information overload, or time constraints (Stangor et al., 1992). However, when there is motivation to form accurate impressions of individuals, exemplar-based processing tend to dominate (Smith, 1990). When participants are asked to respond to a general category of persons (as was the case in the present study for children in the generalized elderly conditions), they are forced to rely on global stereotypes or expectations that do not take into account characteristics of individuals within that category (Green, 1981). Given children's lack of contact with old people (Seefeldt et al., 1977; Sheehan, 1978) it did not come as a surprise that children in the Elderly Prime condition provided responses that were similar to children in the Negative Prime condition as hypothesized.

Children in the Grandparent Prime condition, on the other hand, responded in a similar fashion as did the children in the Positive Prime condition. This suggests that exemplar-based processing took place. According to the exemplar model, specific past experiences with the target person and other individuals influence judgments and perceptions of people (Smith & Zárate, 1992). Exemplars can range from being very detailed representations of specific people (e.g., grandmother) to minimal representations involving only two or three attributes. It

may have been that children in the familiar elderly prime conditions had an image of their own grandparents in mind when they responded to the target stimuli. However, as Smith and Zárate pointed out, an individual need not be encountered in person in order to be represented in memory, and may instead be imagined or experienced through the media or a secondhand account. Therefore, even if the children did not have first-hand experience with their own grandmothers, they could still have acquired a representation of a grandmother, or the attributes associated with grandmothers (e.g., kind, loving, generous, etc.) through their peers, the media, or other social influences.

It has been argued that attitudes, for the most part, are temporary constructions, and that they vary from time to time depending on the information that is most plausible and accessible (Wilson & Hodges, 1992). This argument is intuitively appealing given that in any given social situation, an individual can be categorized in a multitude of ways through the various combinations of superordinate level categories such as age, race, and gender (Stangor et al., 1992). Therefore, the most easily accessible cognitions tend to have the most influence on the way the target is categorized and subsequently evaluated (Srull & Wyer, 1979). The categories that are activated may be processed automatically and without conscious awareness (Smith & Zárate, 1992). This explains why the children in this study, particularly the younger ones, were susceptible to the priming conditions, that is, children primed with the familiar elderly primes responded more positively to the stimuli than children in the generalized elderly conditions.

SUMMARY AND CONCLUSIONS

The findings of this study support the hypothesis that priming may have an influence on the way children depict the elderly in attitude assessment scales. The familiar elderly and generalized elderly constructs were successfully primed, and as a result, children in the Positive Prime and Grandparent Prime conditions were more positive in their assessment of the elderly than children in the Negative Prime and Elderly Prime conditions. Priming studies have shown that the most accessible cognitions about a target (person, object, or event) can have a major influence on perception (Srull & Wyer, 1979). In this study it was demonstrated that children can be influenced to respond positively or negatively by making accessible either the familiar (Grandparent Prime and Positive Prime) or generalized (Elderly Prime and Negative Prime) elderly constructs. People are members of multiple categories, and the way a target is categorized can change as a function of context, or even the perceiver's recent experiences or current goals (Ford et al., 1994). Given that even momentary and accidental contextual factors can considerably affect the way stimulus information is categorized (Higgins et al., 1985; Srull & Wyer, 1979) it is plausible and even likely that some of the contradictory results obtained in this area of research were artifacts of the experimental procedure.

Furthermore, the results of this study support the position that the concept "elderly" represents more than a basic social category (Brewer et al., 1981). It is not a homogeneous category that can adequately represent the range of characteristics or trait associations that are used to depict individuals in this social stratum. Researchers (Brubaker & Powers, 1976; Dobrosky & Bishop, 1986; Hickey et al., 1978) have suggested that the generalized and

familiar elderly are two separate constructs. The outcome of the present study is consistent with this position. Therefore, it is important that future research avoid using grandparents as an example of older adults, particularly if the aim of the inquiry is to assess children's attitudes toward the generalized elderly or vice versa.

Another finding of this study is that younger children were more susceptible to the priming conditions than were the older participants. One explanation for the fifth graders' performance on the Semantic Differential measure is that their judgments were likely mitigated by their awareness of the research hypothesis, which consequently moderated the overall priming effects. However, despite the older children's apparent awareness, their overall performance on the Apperception Task was significantly influenced by the priming conditions to which they were assigned.

The successful priming of the different categorical constructs with the first graders bolsters the position that even young children are adept at utilizing categories as a perceptual tool (Fagot & Leinbach, 1993). However, it also suggests that younger children lack the cognitive sophistication to contrast priming effects (that is, judge the stimulus as less similar to the activated construct). In order to contrast primed constructs, complex cognitive processing is required; participants need to infer a cross-situational relationship, that is, that two ostensibly unrelated events are in fact related, as well as link the two events that have been temporally separated, and then respond in the opposite direction. Young children are unable to integrate multiple pieces of information simultaneously, and they tend to use information that is most salient (Martin et al., 1990). Furthermore, six-year-olds are just emerging from their egocentric stage of development and are just beginning to acquire the skills at inferring the intentions and thoughts of others (Shantz, 1975), which may account for why the first graders in this study were more susceptible to the priming conditions than the older children were.

The children's differential response, as reflected on the Apperception Task and Semantic Differential, indicates that different measures have the potential of capturing a different facet of the multi-dimensional nature of attitudes. The Apperception Task, which indirectly measures attitude, may have circumvented some of the older children's social desirability response sets. As Green (1981) pointed out, if a measure is able to tap into attitudes without obviously doing so, then respondents cannot as easily choose to present themselves in a positive light. Therefore, the Apperception Task may be useful as an attitude assessment tool, however, the time intensive coding that is required makes it unfeasible for studies utilizing a large number of participants. Further research should be conducted to explore other ways in which indirect measures could be used efficiently to gauge attitudes.

The implication of this study is that researchers need to be aware that extraneous information could potentially influence the way respondents react in an experimental environment. Questioning procedures or even stimulus materials could affect construct accessibility, which may in turn influence participants' responses (Wilson & Hodges, 1992). When it comes to assessing attitudes toward the elderly there needs to be greater sensitivity to the fact that the generalized and familiar elderly are separate constructs (see Brubaker & Powers, 1976; Burke, 1981; Dobrosky & Bishop, 1986; Hickey et al., 1978; and Marcoen, 1979), and that different cognitive processes may be involved depending on whether a social group or an individual from that group is being evaluated (Brewer et al., 1981). Also, when age becomes a salient variable, as is the case when images of young and old individuals are juxtaposed, attitudes tend to be more dichotomized (see Green, 1981; and Wingard et al., 1982). Therefore, studies that do not take these variables into consideration run the risk of obtaining spurious results.

In order to accurately assess attitudes toward the elderly, researchers need to have at

their disposal measures that are less susceptible to artifactual constraints. Future studies should continue to focus on refining measurement tools, and identifying contextual and situational variables that influence attitude. Such endeavors will serve as important road maps for future exploration of children's attitudes toward the elderly.

APPENDIX A

CONSENT LETTER

Dear Parent:

As a doctoral student at Loyola University, I am exploring children's attitudes towards the elderly and the factors that may influence such attitudes.

The significance of the study rises from the fact that never before have there been so many young and old individuals living at the same time in modern society, and due to improvements in medical technology the elderly population is expected to increase. How the different age groups relate to each other, therefore, is of great importance.

I am asking you to permit your child to participate in some easy tasks which will measure her/his impressions. There is nothing complicated about the tasks and there are no right or wrong answers. The exercise, which will take about fifteen minutes, will simply engage the creativity of your child.

No grading will be involved and answers will be separated from indication of who made them. Results will be published in general form to interested researchers who can help children, in the future, as they grow into adulthood. If you have questions or observations at any point please feel free to contact the Internal Review Board Chairperson at Loyola University (773) 508-2009.

I am most grateful to you for considering this request. Your child's school has agreed to assist, but their agreement sets up no obligation, only an opportunity for your child to participate in a beneficial and interesting project. By allowing your child to participate, you are making an active decision to contribute to the body of knowledge on the subject. This contribution is invaluable.

To indicate your consent, please sign this form and have your child return it to the school's office as soon as possible. Please have your child return the consent form, signed, even if you've chosen not to allow your child to participate. Thank you very much for your assistance and cooperation.

Sony Hoe, M.A.
Loyola University Chicago

☐ Yes, my child may participate.

Signature of Parent or Guardian

Child's Name

Child's Birth Mth/Yr

Grade & Classroom

☐ No, my child may not participate.

APPENDIX B

Measure of Priming Effects on Children's Attitude

Child's Name: _____ M / F Condition: **NP A-SD-S**

School: _____ Grade: _____

Race: a. African American b. American Indian/Alaskan Native c. Asian/Pacific Islander
d. Caucasian e. Hispanic f. Other _____

All the things that we do together today are not things you will be graded on so you don't have to be nervous. But I would like you to do the best you can, okay?

(Establish rapport with the child and introduce the session with the following statement)

We are going to play a memory game. I will read you a list of words, and as I do I need you to please listen carefully. Afterwards I am going to ask you to say the words back to me, but it doesn't have to be in the order I read them. Do you have any questions? Okay, here is the list:

(Choose from one of the following five depending on the condition)

- | | | | | | |
|----------------------|--------------------------------------|--------------------------------------|------------------------------------|--|---|
| 1) Negative (NP): | <input type="checkbox"/> Bicycle | <input type="checkbox"/> Complaining | <input type="checkbox"/> Forgetful | <input type="checkbox"/> Train | <input type="checkbox"/> Boring |
| | <input type="checkbox"/> Ship | <input type="checkbox"/> Lonely | <input type="checkbox"/> Car | <input type="checkbox"/> Grumpy | <input type="checkbox"/> Truck |
| 2) Positive (PP): | <input type="checkbox"/> Interesting | <input type="checkbox"/> Ship | <input type="checkbox"/> Cheerful | <input type="checkbox"/> Truck | <input type="checkbox"/> Warm |
| | <input type="checkbox"/> Loving | <input type="checkbox"/> Car | <input type="checkbox"/> Train | <input type="checkbox"/> Bicycle | <input type="checkbox"/> Helpful |
| 3) Elderly (EP): | <input type="checkbox"/> Bicycle | <input type="checkbox"/> Old Woman | <input type="checkbox"/> Car | <input type="checkbox"/> Wrinkled Person | <input type="checkbox"/> Ship |
| | <input type="checkbox"/> Old Person | <input type="checkbox"/> Truck | <input type="checkbox"/> Train | <input type="checkbox"/> Old Lady | <input type="checkbox"/> Gray-Haired Person |
| 4) Grandparent (GP): | <input type="checkbox"/> Bicycle | <input type="checkbox"/> Grandmother | <input type="checkbox"/> Train | <input type="checkbox"/> Grandma | <input type="checkbox"/> Ship |
| | <input type="checkbox"/> Grandparent | <input type="checkbox"/> Nanna | <input type="checkbox"/> Car | <input type="checkbox"/> Truck | <input type="checkbox"/> Granny |
| 5) Control (CG): | <input type="checkbox"/> Desk | <input type="checkbox"/> Chair | <input type="checkbox"/> Truck | <input type="checkbox"/> Train | <input type="checkbox"/> Ship |
| | <input type="checkbox"/> Lamp | <input type="checkbox"/> Sofa | <input type="checkbox"/> Table | <input type="checkbox"/> Car | <input type="checkbox"/> Bicycle |

(After the list has been read, instruct the child the following)

Okay, now please repeat to me all the words you remember from the list I just read to you.

Good, you remembered all the words (Or) Good, now here are the words you left out:

(Read back to the child the words that were not recalled)

(The child is then asked to identify the words, in the sentence, from the list read to them earlier)

Okay, now I'm going to read you several sentences and you tell me which words you've heard from the list I read you earlier:

Negative prime (NP):

1. Mrs. Jones was ☐Complaining that the little boy accidentally rode his ☐Bicycle over her toes.
2. Mrs. Brown, being the ☐Forgetful person she is, didn't board her ☐Train when it pulled up to the station.
3. Mrs. Smith found people ☐Boring, so to get away from others she took a cruise on a ☐Ship.
4. Mrs. Drew is constantly ☐Lonely and frequently takes the ☐Car out for a drive.
5. Mrs. Pierce is so ☐Grumpy that she could make ☐Truck drivers cry.

Positive prime (PP):

1. Mrs. Smith found people ☐Interesting, so to meet others she took a cruise on a ☐Ship.
2. Mrs. Pierce is so ☐Helpful that she could make ☐Truck drivers sing.
3. Mrs. Drew is constantly ☐Cheerful and frequently takes her ☐Car out for a drive.
4. Mrs. Brown, being the ☐Loving person she is, always walks her husband to the ☐Train station.
5. Mrs. Jones is a ☐Warm person, and was forgiving when the little boy accidentally rode his ☐Bicycle over her toes.

Elderly prime (EP):

1. As the boy was riding his ☐Bicycle, he passed by an ☐Old Woman crossing the street.
2. The ☐Wrinkled Person got out of the ☐Car and took out a shopping cart and a large purse.
3. The captain of the cruise ☐Ship had an ☐Old Person on board who loved to talk.
4. The girl walked up to the ☐Old Lady who was waiting at the ☐Train station.
5. When the ☐Truck rumbled by, the ☐Gray-Haired Person dropped her glasses.

Grandparent prime (GP):

1. As the boy was riding his ☐Bicycle, he passed by ☐Nanna crossing the street.
2. The girl walked up to her ☐Grandma who was waiting at the ☐Train station.
3. The captain of the cruise ☐Ship had a ☐Grandparent on board who loved to talk.
4. The ☐Grandmother got out of the ☐Car and took out a shopping cart and a large purse.
5. When the ☐Truck rumbled by ☐Granny dropped her glasses.

Control group (CG):

1. As the boy crossed the street, he saw a ☐Desk on the back of a ☐Truck.
2. The girl walked to the ☐Chair, sat down, and waited for the ☐Train.
3. The captain of the cruise ☐Ship turned on the cabin ☐Lamp.
4. After buying the ☐Sofa, they found it did not fit in the ☐Car.
5. The boy was riding his ☐Bicycle in the kitchen when he ran into the ☐Table.

(Thank the child and enlist him/her for the next session. Explain that the next few activities are totally different from the one just completed.)

Apperception Task (A)

(During this session no reference will be made to the age of the adult, and the label "old" or "elderly" must not be used) (Introduce this task as follows)

This is a story telling session. I have some pictures that I am going to show you, and for each picture I would like you to make up a story. Tell me what happened before and what is happening now. Say what the people are feeling and thinking and how the story will come out. You can make up any kind of story you like. Do you have any questions? Okay, here is the first picture. (Prior to actual session, administer the practice task for 1st graders.)

(WOMAN-BOY)

(After about 15 seconds without a response, ask:) **Can you tell me anything else?**

- 1) **In your story what is the child doing?**
- 2) **Why is he (activity from previous line)?**
- 3) **What do you think happened right before this picture?**
- 4) **What is happening now?**
- 5) **Tell me about the grown up in your story?**
- 6) **In your story, what is the grown up doing?**
- 7) **How do you think the grown up is feeling (and why)?**

(WOMAN-GIRL)

(After about 15 seconds without a response, ask:) **Can you tell me anything else?**

- 1) **In your story what is the child doing?**
- 2) **Why is she (activity from previous line)?**
- 3) **What do you think happened right before this picture?**
- 4) **What is happening now?**
- 5) **Tell me about the grown up in your story?**
- 6) **In your story, what is the grown up doing?**
- 7) **How do you think the grown up is feeling (and why)?**

Semantic Differential (SD)

Now we're going to play a game called First Impressions. I'm going to show you a picture and then ask you a few questions. All right, here's the picture.

(While pointing to the portrait of the adult, ask the child)

Is this person kind, mean, or in between (i.e., not kind and not mean)?

(Determine the degree of intensity of response by, for example, asking)

Is this person very kind, kind, or a little kind?




	Very		A Little	Neutral	A Little		Very	
a. Kind	①	②	③	④	⑤	⑥	⑦	Mean
b. Sad	⑦	⑥	⑤	④	③	②	①	Happy
c. Right	①	②	③	④	⑤	⑥	⑦	Wrong
d. Terrible	⑦	⑥	⑤	④	③	②	①	Wonderful
e. Pretty	①	②	③	④	⑤	⑥	⑦	Ugly
f. Unfriendly	⑦	⑥	⑤	④	③	②	①	Friendly
g. Healthy	①	②	③	④	⑤	⑥	⑦	Sick
h. Bad	⑦	⑥	⑤	④	③	②	①	Good
I. Interesting	①	②	③	④	⑤	⑥	⑦	Boring
j. Weak	⑦	⑥	⑤	④	③	②	①	Strong

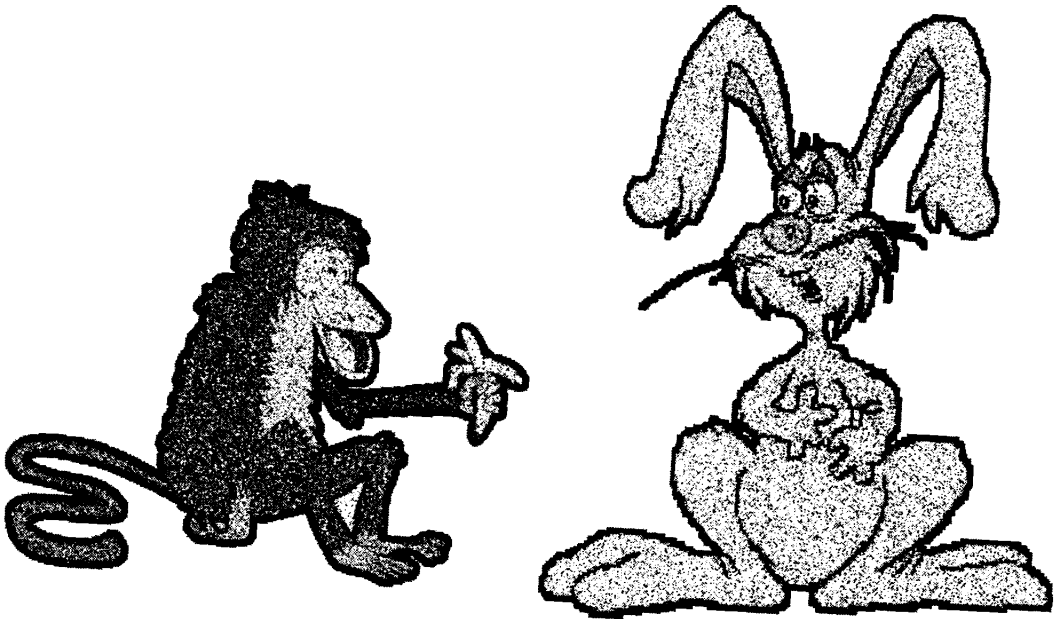
Attribute Saliency Task (S)

(Introduce this task as follows)

We are going to play a matching game and what you need to do is to select the picture that best matches these (point to the 2 target pictures). There are no right or wrong answers so just go ahead and pick the one you think best matches these two. Do you have any questions?

(The 10 sets of pictures should be presented in **randomized order**. Please take careful note of the particular set being presented and the subject's choice.)

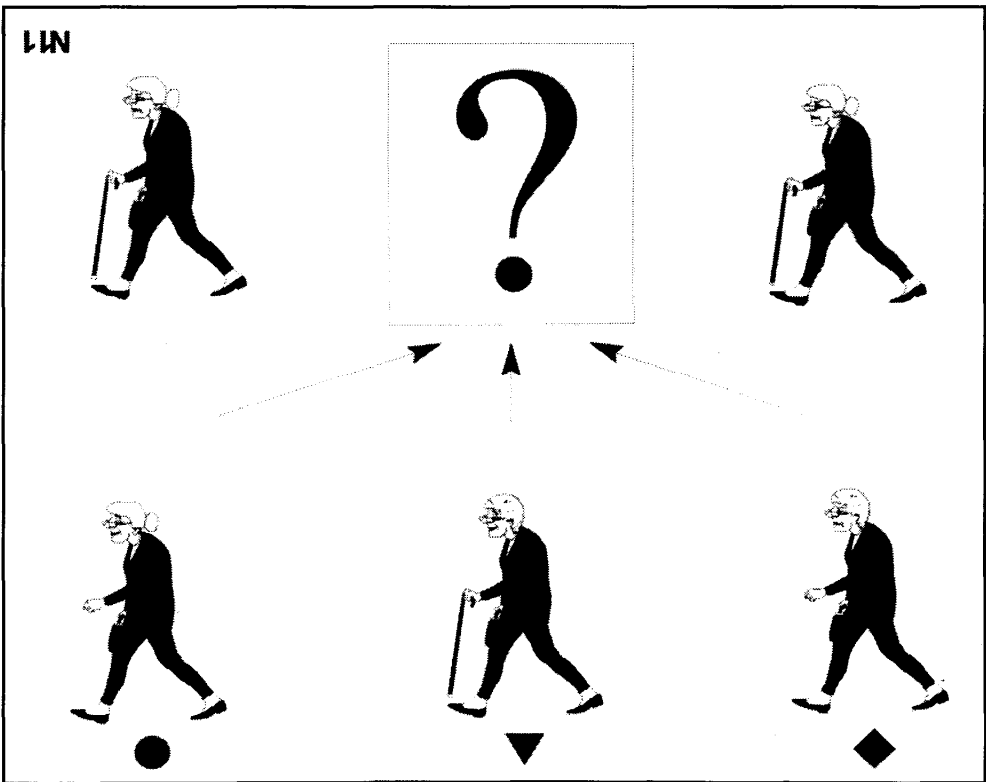
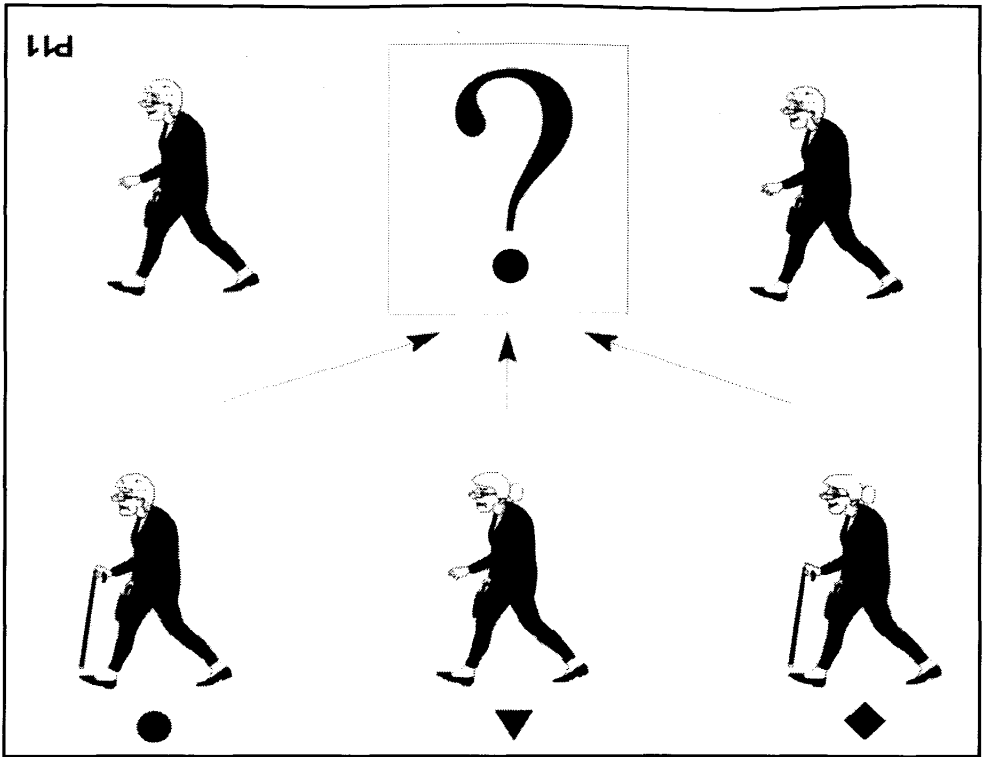
			
P11			
P12			
P13			
P14			
P21			
N11			
N12			
N13			
N14			
N21			











APPENDIX C

Coding Scheme for Apperception Task

	Categories	Example
A	Main Reason for Child's Affect	
A0	No reference to, or reason given for child's affect	
A1	Accident or physical discomfort; also child hungry, wants bottle, just awoke, bored, etc.	Fell, tripped, sick, stomach hurts, etc.
A2	An event or incident	Child lost, parents away, separation, death, etc. Sibling/friend takes a toy away, child lost smthg.
A3	Reason directly related to adult; Obstruction of goals, wants or desires	Wants something (toy, ice cream) or wants to do something (play, sit down, or go somewhere) but couldn't OR doesn't want something done to him (picked up, held, dressed, etc.). Child feels bad/sorry for the adult. Adult scolded or yelled at child. Adult hurting child.
[B]	[Adult's Affect Vis a Vis Child]	(Mainly from line # 7)
1	Sympathetic or positive response	Feels sad, bad, worried, sorry for child, or happy that child feels better, i.e., empathy for child.
2	Neutral affect, affect unrelated to child, or no affect mentioned	Feels angry that the bus was late or that someone had hurt the child.
3	Non-sympathetic or negative response	Feels mad, angry, annoyed, upset, etc.
[C]	[Action/Role of Adult]	(Mostly verbs)
1	Very Positive	Hugs/kisses/sings to/reads to/plays with/cradles/rocks child. Engages in activity with child.
2	Positive	Tries to assuage, reassure, talk, reason with child, takes care or accompanies child, etc. Forgives child.
3	Neutral	Sitting, holding purse, changing diaper, picking up or holding child, putting band aid, asking what's the matter, taking child to doctor/nurse etc.
4	Negative	Denies child from attaining goals, wants, or desires (regardless of circumstance--no money etc.) Unintentionally causes child's affect (gives shot, etc.)
5	Very Negative	Intentionally causes child's affect (yells at/threatens/spanks child, etc.); Child afraid of adult.

D	Efficacy of Adult	
D0	Adult's efficacy not addressed	
D1	Comforter--Successful	(Generally positive)--e.g., child calms down or feels better.
D2	Comforter--Unsuccessful	(Generally negative)--e.g., child continues to cry.
D3	Causal agent--Successful	(Generally negative)--e.g., adult does not give in to child and does not feel bad.
D4	Causal agent--Unsuccessful	(Generally positive)--e.g., adult gives in to child or compromises.
D5	Adult Ineffective	Adult did not: know what to do, react appropriately, resolve or improve situation. Adult not in control.
[E]	[Description of Adult (Traits etc.)]	(Mostly adjectives and some nouns)
1	Positive	Loving, kind, nice, fine, happy etc.; wants to see child; doesn't like to see children cry. Also child likes/loves adult.
2	Neutral or no description	Wears glasses, has short hair, etc.
3	Negative	Stranger, sad, mean, grumpy, fat, lives alone, not married, poor, no money, dislikes children, etc.
F	Age-Related Description	"Old" or specific age mentioned.
G	Adult's Relationship to Child	
G1	Relative--appropriate	Grandmother or grandaunt.
G2	Relative--inappropriate	Mother, father, sister.
G3	Non-Relative--appropriate	Babysitter, nanny, maid, just an old lady, etc.
G4	Non-Relative--inappropriate	Girl, man, friend, etc.
[H]	[Overall Theme of the Story]	
1	Very positive	The adult misses child or misses opportunity to visit frequently and vv.; main theme is adult comforting child.
2	Positive	The adult or child is visiting; they're going on a trip, planning/having a party, etc. Adult is taking care of child.
3	Neutral, lacks theme, or implausible	Adult babysitting, trying to clothe child, waiting for a bus, at the store, at home, at doctor's office, etc. Include theme of child losing smthg if it's the main theme. E.g. of implausible--adult just had a baby.

4	Negative	Adult lost or had smthg stolen (victim). Adult not feeling well, etc. Adult has to do something she dislikes. Adult and/or child in difficult circumstance--no money, lost, etc. Something happened to someone. Child's an orphan. Child's parents are divorced. Discord between adults or mild discord between adult and child.
5	Very negative	The adult's poor, homeless, etc. Someone is dying or has died. Child or group of children were making fun of adult. Include theme of adult being upset with child or vv., also if serious discord is the main theme between the two. Child fearful of adult or didn't want to interact with adult.

Record the frequency of each category item.

[] Codes in bracketed categories are to reflect category item number.

Don't code the same item twice, e.g., "She's holding a purse" and "She has a purse" even though one may have been mentioned in the main story and the other in the follow up questions.

Affect Related to Adult

- B If it is indicated that adult is sad but affect is not directly related to child, check off B2 (ie. affect unrelated to child), e.g., "adult is sad because something happened to the dad." Indicate such responses under E3.
- B1 Don't include adult's affect if it's a result of anything other than empathy for child. E.g., don't include if response is: adult is sad because she can't make the child feel better.
- E If adult's affect is indicated in more than one way, e.g., "the adult is sad" and "the adult is crying," record them as two responses under E3.

REFERENCES

- Adams, G. R., and Crane, P. 1980. An assessment of parents' and teachers' expectations of preschool children's social preference for attractive or unattractive children and adults. Child Development 51: 224-231.
- Aday, R., Rice-Sims, C., and Evans, E. 1991. Youth's attitudes toward the elderly: The impact of intergenerational partners. Journal of Applied Gerontology 10 (3): 372-384.
- Ajzen, I. 1993. Attitude theory and the attitude-behavior relation. In New directions in attitude measurement, ed. D. Krebs, and P. Schmidt, 41-57. New York: de Gruyter.
- Allport, G. 1953. The nature of prejudice. Cambridge, MA: Addison-Wesley.
- Arluke, A., and Levin, J. 1985. "Second childhood": Old age in popular culture. In Growing old in America: New perspectives on old age, ed. B. B. Hess, and E. W. Markson, 3rd ed. 151-158. New Jersey: New Brunswick.
- Ashmore, R. D., Del Boca, F. K. 1981. Conceptual approaches to stereotypes and stereotyping. In D. L. Hamilton ed., Cognitive processes in stereotyping and intergroup behavior, 1-35. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Auerbach, D. N., and Levenson, R. L. Jr. 1977. Second impressions: Attitude change in college students toward the elderly. Gerontologist 17: 362-366.
- Baggett, S. 1981. Attitudinal consequences of older adult volunteers in the public school setting. Educational Gerontology 7: 21-31.
- Barenboim, C. 1981. The development of person perception in childhood and adolescence: From behavioral comparisons to psychological constructs to psychological comparisons. Child Development 52: 129-144.
- Barsalou, L. W. 1990. On the indistinguishability of exemplar memory and abstraction in category representation. In Advances in Social Cognition Vol. 3, ed. T. K. Srull and R. S. Wyer, Jr., Hillsdale, NJ: Erlbaum.
- Bell, B. and Stanfield, G. 1973. Chronological age in relation to attitudinal judgments: An experimental analysis. Journal of Gerontology 28 (4): 491-496.
- Bellak, L. 1986. The Thematic Apperception Test, The Children's Apperception Test and The Senior Apperception Technique in clinical use 4th ed.. New York, NY: Harcourt Brace

Jovanovich.

- Bem, D. J. 1968. Attitudes as self-descriptions: Another look at the attitude-behavior link. In Psychological foundations of attitudes, ed. A. Greenwald, T. Brock, and T. Ostrom, 197-215. New York, NY: Academic Press.
- Bennett, R. 1976. Attitudes of the young toward the old: A review of research. Personal and Guidance Journal 55: 136-139.
- Branco, K. J., and Williamson, J. B. 1982. Stereotyping and the life cycle: Views of aging and the aged. In In the eye of the beholder, ed. A. G. Miller, 364-410. New York, NY: Praeger.
- Brewer, M. B., Dull, V., and Lui, L. 1981. Perceptions of the elderly: Stereotypes as prototypes. Journal of Personality and Social Psychology 4 (4): 656-670.
- Brewer, M. B., and Weber, J. G. 1994. Self-evaluation effects of interpersonal versus intergroup social comparison. Journal of Personality and Social Psychology 66 (2): 268-275.
- Brewer, M. B., Weber, J. G., and Carini, B. 1995. Person memory in intergroup contexts: Categorization versus individuation. Journal of Personality and Social Psychology 69 (1): 29-40.
- Brown, J. P., and Grams, A. 1983. Nontraditional study of aging in a university setting. Gerontology and Geriatrics Education 4 (1): 45-52.
- Brubaker, T., and Powers, E. 1976. The stereotype of "old"--A review and alternative approach. Journal of Gerontology 31 (4): 441-447.
- Burke, J. 1981. Young children's attitudes and perceptions of older adults. International Journal of Aging and Human Development 14 (3): 205-222.
- Campbell, D. T. 1967. Stereotypes and the perception of group differences. American Psychologist 22: 817-829.
- Cantor, N., and Mischel, W. 1979. Prototypes in person perception. In Advances in experimental social psychology, Vol. 12, ed. L. Berkowitz. New York: Academic Press.
- Carstensen, L., Mason, S., and Caldwell, E. 1982. Children's attitudes toward the elderly: An intergenerational technique for change. Educational Gerontology 8 (3): 291-301.
- Carter, D., and Levy, G. 1988. Cognitive aspects of early sex-role development: The influence of gender schemas on preschoolers' memories and preferences for sex-typed toys and activities. Child Development 59: 782-792.

- Cauthen, N. R., Robinson, I. E., and Krauss, H. H. 1971. Stereotypes: A review of the literature 1926-1968. Journal of Social Psychology 84: 103-125.
- Caspi, A. 1984. Contact hypothesis and inter-age attitudes: A field study of cross-age contact. Social Psychology Quarterly 47 (1): 74-80.
- Chamberlain, V. M., Fetterman, E., Maher, M. 1994. Innovation in elder and child care: An intergenerational experience. Educational Gerontology 19: 193-204.
- Cherry, D., Benest, F., Gates, B., and White, J. 1985. Intergenerational service programs: Meeting shared needs of young and old. The Gerontologist 25 (2): 126-129.
- Corbin, D., Kagan, D. M., and Metil-Corbin, J. 1987. Content analysis of an intergenerational unit of aging in sixth-grade classroom. Educational Gerontology 13 (5): 403-411.
- Couper, D., Sheehan, N., and Thomas, E. 1991. Attitude toward old people: The impact of an intergenerational program. Educational Gerontology 17: 41-53.
- Crockett, W., Press, A., and Osterkamp, M. 1979. The effect of deviations from stereotyped expectations upon attitudes toward older persons. Journal of Gerontology 34 (3): 368-374.
- Davidson, D., Cameron, P., and Jergovic, D. 1995. The effects of children's stereotypes on their memory for elderly individuals. Merrill-Palmer Quarterly 41 (1): 70-90.
- Dellman-Jenkins, M., Lambert, D., and Fruit, D. 1991. Fostering preschoolers' prosocial behaviors toward the elderly: The effect of an intergenerational program. Educational Gerontology 17: 21-32.
- Dellman-Jenkins, M., Lambert, D., Fruit, D., and Dinero, T. 1986. Old and young together: Effect of an educational program on preschoolers' attitudes toward older people. Childhood Education 82: 206-212.
- Devine, P. G. 1989a. Automatic and controlled processes in prejudice: The role of stereotypes in personal beliefs. In Attitude structure and function, ed. A. R. Pratkanis, S. J. Breckler, and A. G. Greenwald. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Devine, P. G. 1989b. Stereotypes and prejudice: Their automatic and controlled components. Journal of Personality and Social Psychology 56: 5-18.
- Dion, K. K. 1973. Young children's stereotyping of facial attractiveness. Developmental Psychology 9 (2): 183-188.
- Dobrosky, B., and Bishop, J. 1986. Children's perceptions of old people. Educational Gerontology 12: 429-439.
- Doka, K. 1985/86. Adolescent attitudes and beliefs toward aging and the elderly.

Intergenerational Journal of Aging and Human Development 22 (3): 173-187.

- Dooley, S. and Frankel, G. 1990. Improving attitudes toward elderly people: Evaluation of an intervention program for adolescents. Canadian Journal on Aging/Revue Canadienne du Vieillissement 9 (4): 400-409.
- Dovidio, J. S., and Gaertner, S. L. 1993. Stereotypes and evaluative intergroup bias. In Affect, cognition, and stereotyping: Interactive processes in group perception, ed. D. M. Mackie, and D. L. Hamilton. San Diego: Academic Press.
- Dunkle, R., and Mikelthun, B. 1983. Intergenerational programming: An adopt-a-grandparent program in a retirement community. In Activities and the "Well Elderly", ed. P. Foster 93-106. New York: Haworth Press.
- Fagot, B., and Leinbach, M. 1993. Gender-role development in young children: From discrimination to labeling. Developmental Review 13: 205-224.
- Fazio, R. 1990. Multiple processes by which attitudes guide behavior: The mode model as an integrative framework. In Advances in experimental social psychology Volume 23, ed. M. Zanna, 75-109. New York: Academic Press.
- Feldman, J. M., and Lynch, J. G., Jr. 1988. Self-generated validity and other effects of measurement on belief, attitude, intention, and behavior. Journal of Applied Psychology 73: 421-435.
- Fillmer, H. T. 1982. Sex stereotyping of the elderly by children. Educational Gerontology 8: 77-85.
- Fillmer, H. T. 1984. Children's descriptions of and attitudes toward the elderly. Educational Gerontology 10: 99-107.
- Fillmer, H. T., and Meadows, R. 1986. The portrayal of older characters in five sets of basal readers. Elementary School Journal 86 (5): 651-662.
- Finnerty-Fried, P. 1982. Instruments for the assessment of attitudes toward older persons. Measurement and Evaluation in Guidance 15 (3): 201-209.
- Fishbein, M., and Raven, B. 1962. The AB scales: An operational definition of belief and attitude. Human Relations 15: 35-44.
- Fishman, J. 1956. An examination of the process and function of social stereotyping. Journal of Social Psychology 43: 27-64.
- Fiske, S., and Neuberg, S. 1990. A continuum of impression formation, from category-based to individuating processes: Influences of information and motivation on attention and interpretation. In Advances in experimental social psychology Volume 23, ed. M. Zanna, 1-74. New York: Academic Press.

- Ford, T. E., Stangor, C., and Duan, C. 1994. Influence of social category accessibility and category-associated trait accessibility on judgments of individuals. Social Cognition 12 (2): 149-168.
- Fyock, J., and Stangor, C. 1994. The role of memory biases in stereotype maintenance. British Journal of Social Psychology 33 (3): 331-343.
- Glass, J. C., Jr., and Knott, E. S. 1982. Effectiveness of a workshop in aging in changing middle-aged adults' attitudes toward the aged. Educational Gerontology 8: 359-372.
- Gellman, S. A., Collman, P., and Maccoby, E. E. 1986. Inferring properties from categories versus inferring categories from properties: The case of gender. Child Development 57: 396-404.
- Gilbert, D. T., and Hixon, J. G. 1991. The trouble of thinking: Activation and application of stereotypic beliefs. Journal of Personality and Social Psychology 60 (4): 509-517.
- Glass, J. and Knott, E. 1982. Effectiveness of a workshop on aging in changing middle-aged adults' attitudes toward the aged. Educational Gerontology 8: 359-372.
- Glass, J. and Trent, C. 1980. Changing ninth-graders attitudes toward older persons. Research on Aging 2 (4): 499-512.
- Green, S. K. 1981. Attitudes and perceptions about the elderly: Current and future perspectives. International Journal of Aging and Human Development 13 (2): 99-119.
- Halloran, J. D. 1967. Attitude formation and change. England: Leicester University Press.
- Hamilton, D. L. 1979. A cognitive-attribitional analysis of stereotyping. In Advances in experimental social psychology Vol. 12, ed. L. Berkowitz. New York: Academic Press.
- Hamilton, D. L., Stroessner, S. J., and Mackie, D. M. 1993. The influence of affect on stereotyping: The case of illusory correlation. In Affect, cognition, and stereotyping: Interactive processes in group perception, ed. D. M. Mackie, and D. L. Hamilton. San Diego: Academic Press.
- Herr, P. 1986. Consequences of priming: Judgment and behavior. Journal of Personality and Social Psychology 51: 1106-1115.
- Hickey, T., Bragg, S. M., Rakowski, W., and Hultsch, D. F. 1978-1979. Attitude instrument analysis: An examination of factor consistency across two samples. International Journal of Aging and Human Development 9: 359-375.
- Hickey, T., Hickey, L., and Kalish, R. 1968. Children's perceptions of the elderly. Journal of Genetic Psychology 112: 227-235.
- Hicks, D. A., Rogers, C. J., and Shemberg, K. 1976. "Attitudes" toward the elderly: A

- comparison of measures. Experimental Aging Research 2 (2): 119-124.
- Hill, D. 1987. Promoting intergenerational programs: Triads with youth, elderly, and students, a case example. Journal of Gerontological Social Work 10 (3/4): 155-165.
- Higgins, E. T., Bargh, J. A., and Lombardi, W. 1985. Nature of priming effects on categorization. Journal of Experimental Psychology 11 (1): 59-69.
- Higgins, E. T., Rholes, W. S., and Jones, C. R. 1977. Category accessibility and impression formation. Journal of Experimental Social Psychology 13: 141-154.
- Holtzman, J., and Beck, J. 1979. Palmore's facts on aging quiz: A reappraisal. The Gerontologist 19: 54-56.
- Ivester, C., and King, K. 1977. Attitudes of adolescents toward the aged. The Gerontologist 17 (1): 85-89.
- Jantz, R., Seefeldt, C., Galper, A., and Serock, K. 1976. The CATE: Children's attitudes toward the elderly. Test manual. College Park, MD: University of Maryland. ERIC Document Reproduction Service No. PSO 12399.
- Jantz, R., Seefeldt, C., Galper, A., and Serlock, L. 1977. Children's attitudes toward the elderly. Social Education 41: 518-523.
- Kafer, R. A., Rakowski, W., Lachman, M., and Hickey, T. 1980. Aging opinion survey: A report on instrument development. International Journal of Aging and Human Development 11 (4): 319-333.
- Kilty, K., and Feld, A. 1976. Attitudes toward aging and toward the needs of older people. Journal of Gerontology 31 (5): 586-594.
- Kirby, D. M., and Gardner, R. C. 1973. Ethnic stereotypes: Determinants in children and their parents. Canadian Journal of Psychology 27 (2): 127-143.
- Knox, V., Gekoski, W., and Johnson, E. 1986. Contact with and perception of the elderly. The Gerontologist 26: 309-313.
- Koblinsky, S. A., and Cruse, D. F. 1981. The role of frameworks in children's retention of sex-related story content. Journal of Experimental Child Psychology 31: 321-331.
- Kocarnik, R. and Ponzetti, J. 1986. The influence of intergenerational contact on child care participants' attitude toward the elderly. Child Care Quarterly 15 (4): 244-250.
- Kocarnik, R. and Ponzetti, J. 1991. The advantages and challenges of intergenerational programs in long term care facilities. Journal of Gerontological Social Work 16 (1/2): 97-107.

- Kogan, N. 1961. Attitudes toward old people: The development of a scale and an examination of correlates. Journal of Abnormal and Social Psychology 62 (1): 44-54.
- Kogan, N., Stephens, J., and Shelton, F. 1961. Age differences: A developmental study of discriminability and affective response. Journal of Abnormal and Social Psychology 62 (2): 221-230.
- Kopac, C., and Price, D. 1987. Bringing together the young and old with intergenerational day care. Pediatric Nursing 13 (4): 227-229.
- Krause, D., and Chapin, R. 1987. An examination of attitudes about old age in a sample of elementary school children. Gerontology and Geriatrics Education 7 (3/4): 81-91.
- Kuehne, V. 1992. Older adults in intergenerational programs: What are their experiences really like? Activities, Adaptation, and Aging 16 (4): 49-67.
- Labouvie-Vief, G., and Baltes, P. 1976. Reduction of adolescent misperceptions of the aged. Journal of Gerontology 31: 68-71.
- Lambert, D., Dellmann-Jenkins, M., and Fruit, D. 1990. Planning for contact between the generations: An effective approach. The Gerontologist 30 (4): 553-557.
- Lawrence, J. 1974. The effect of perceived age on initial impressions and normative role expectations. International Journal of Aging and Human Development 5 (4): 369-391.
- Levy, G. D., and Fivush, R. 1993. Scripts and gender: A new approach for examining gender-role development. Developmental Review 13: 126-146.
- Liebman, T. 1984. We bring generations together! Young Children (September) 70-75.
- Livesley, W. J., and Bromley, D. B. 1973. Person perception in childhood and adolescence. New York, NY: John Wiley and Sons.
- Lombardi, W. J., Higgins, E. T., and Bargh, J. A. 1987. The role of consciousness in priming effects on categorization: Assimilation versus contrast as a function of awareness of the priming task. Personality and Social Psychology Bulletin 13 (3): 411-429.
- Lott, A. J., and Lott, B. E. 1968. A learning theory approach to interpersonal attitudes. In Psychological foundations of attitudes, ed. A. Greenwald, T. Brock, and T. Ostrom, 67-88. New York, NY: Academic Press.
- Lowenthal, B., and Egan, R. 1991. Senior citizen volunteers in a university day-care center. Educational Gerontology 17 (4): 363-378.
- Marcoen, A. 1979. Children's perception of aged persons and grandparents. International Journal of Behavioral Development 2: 87-105.

- Marks, R., Newman, S., and Onawola, R. 1985. Latency aged children's views of aging. Educational Gerontology 11 (2/3): 89-99.
- Martin, C. L., and Halverson, C. F., Jr. 1981. A schematic processing model of sex typing and stereotyping in children. Child Development 52: 119-1134.
- Martin, C., Wood, C., and Little, J. 1990. The development of gender stereotype components. Child Development 61: 1891-1904.
- McTavish, D. 1971. Perceptions of old people: A review of research methodologies and findings. Gerontologist 11 (4): 90-101.
- Miller, M. 1986. Elderly persons as intergenerational child care providers. Journal of Employment Counseling 23 (4): 156-162.
- Miller, R., and Dodder, R. 1980. A revision of Palmore's facts on aging quiz. The Gerontologist 20: 673-680.
- Miller, S., Blalock, J., and Ginsburg, H. T. 1984. Children and the aged: Attitudes, contact, and discriminative ability. International Journal of Aging and Human Development 19: 47-53.
- Mitchell, J., Wilson, K., Revicki, D., and Parker, L. 1985. Children's perceptions of aging: A multidimensional approach to differences by age, sex, and race. The Gerontologist 25: 182-187.
- Murphy-Russell, S., Die, A. H., and Walker, J. L. 1986. Changing attitudes toward the elderly: The impact of three methods of attitude change. Educational Gerontology 12: 241-251.
- Mutran, E. and Reitzes, D. 1984. Intergenerational support activities and well-being among the elderly. American Sociological Review 49: 117-130.
- Naus, P. J. 1973. Some correlates of attitudes towards old people. International Journal of Aging and Human Development 4 (3): 229-243.
- Newman, S., Vasudev, J., and Onawola, R. 1985. Older volunteers' perceptions of impacts of volunteering on their psychological well-being. Journal of Applied Gerontology 4 (2): 123-134.
- Newman, S., and Riess, J. 1992. Older workers in intergenerational child care. Journal of Gerontological Social Work 19 (2): 45-66.
- Newman, S., and Ward, C. 1993. An observational study of intergenerational activities and behavior change in dementing elders at adult day care centers. The International Journal of Aging and Human Development 36 (3): 253-265.
- Nishi-Strattner, M., and Myers, J. 1983. Attitudes toward the elderly: An intergenerational

examination. Educational Gerontology 8: 389-397.

- Olejnik, A. B., and LaRue, A. A. 1981. Changes in adolescents' perceptions of the aged: The effects of intergenerational contact. Educational Gerontology 6 (4): 339-351.
- Ostrom, T. M. 1989. Interdependence of attitude theories and measurement. In Attitude structure and function, ed. A. R. Pratkanis, S. J. Breckler, and A. G. Greenwald, 11-36. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Ostrom, T. M., Carpenter, S. L., Sedikides, C., and Li, F. 1993. Differential processing of in-group and out-group information. Journal of Personality and Social Psychology 64: 21-34.
- Ostrow, A. C., Keener, R. E., and Perry, S. A. 1987. The age grading of physical activity among children. International Journal of Aging and Human Development 24 (2): 101-111.
- Palmore, E. 1977. Facts on aging. The Gerontologist 17 (4): 315-320.
- Page, S., Olivas, R., Driver, J., and Driver, R. 1981. Children's attitudes toward the elderly and aging. Educational Gerontology 7: 43-47.
- Peacock, W., and Talley, W. 1984. Intergenerational contact: A way to counteract ageism. Educational Gerontology 10 (1-2): 13-24.
- Perloff, R. M. 1977. Some antecedents of children's sex-role stereotypes. Psychological Reports 40 (2): 463-466.
- Pratkanis, A. 1989. The cognitive representation of attitudes. In Attitude structure and function, ed. A. R. Pratkanis, S. J. Breckler, and A. G. Greenwald, 71-98. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Rebok, G. 1987. Life-span cognitive development. New York, NY: Holt, Rinehart, and Winston.
- Reinke, B., Holmes, D., and Denney, N. 1981. Influence of a "Friendly Visitor" program on the cognitive functioning and morale of elderly persons. American Journal of Community Psychology 9 (4): 491-504.
- Reno, R. 1979. Attribution for success and failure as a function of perceived age. Journal of Gerontology 34 (5): 709-715.
- Rholes, W. S., and Ruble, D. N. 1984. Children's understanding of dispositional characteristics of others. Child Development 55: 550-560.
- Rich, P. E., Myrick, R. D., and Campbell, C. 1983. Changing children's perceptions of the elderly. Educational Gerontology 9: 483-491.

- Richman, J. 1977. The foolishness and wisdom of age: Attitudes toward the elderly as reflected in jokes. Gerontologist 17 (3): 210-219.
- Ronis, D., Yates, F., and Kirscht, J. 1989. Attitudes, decisions, and habits as determinants of repeated behavior. In Attitude structure and function, ed. A. R. Pratkanis, S. J. Breckler, and A. G. Greenwald, 213-239. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Rosencranz, M. and McNevin, T. 1969. A factor analysis of attitudes toward the aged. Gerontologist 9: 55-59.
- Rosenthal, R., and Rosnow, R. 1984. Essentials of behavioral research. New York: McGraw-Hill.
- Rosenwasser, S. M., McBride, P. A., Brantley, T., and Ginsburg, H. J. 1983. Children and aging: Attitudes, differentiation ability, and quantity and quality of contact. The Journal of Genetic Psychology 147 (3): 407-415.
- Rothbard, M., Evans, M., and Fulero, S. 1979. Recall for confirming events: Memory processes and the maintenance of social stereotypes. Journal of Experimental Social Psychology 15: 343-355.
- Saltz, R. 1971. Aging persons as child-care workers in a foster-grandparent program: Psychosocial effects and work performance. Aging and Human Development 2: 314-340.
- Schaller, M., and Maass, A. 1989. Illusory correlation and social categorization: Toward an integration of motivational and cognitive factors in stereotype formation. Journal of Personality and Social Psychology 56: 709-721.
- Seefeldt, C. 1984. Children's attitudes toward the elderly: A cross-cultural comparison. International Journal of Aging and Human Development 19 (4): 319-328.
- Seefeldt, C. 1987a, October. Intergenerational programs: Making them work. Childhood Education 63: 14-17.
- Seefeldt, C. 1987b. The effects of preschoolers' visit to a nursing home. Gerontologist 27 (2): 228-232.
- Seefeldt, C. 1989. Intergenerational programs--impact on attitudes. Journal of Children in Contemporary Society 20 (3/4): 185-194.
- Seefeldt, C., Jantz, R., Galper, S., and Serock, K. 1977. Children's attitudes toward the elderly: educational implications. Educational Gerontology 2: 301-311.
- Seefeldt, C., and Keawkungwal, S. R. 1986. Children's attitudes toward the elderly in Thailand. Educational Gerontology 12: 151-158.

- Seltzer, M., and Atchley, R. 1971. The concept of old: Changing attitudes and stereotypes. Gerontologist 11: 226-232.
- Sheehan, R. 1978. Young children's contact with the elderly. Journal of Gerontology 33 (4): 567-574.
- Shantz, C. 1975. The development of social cognition. In Review of child development research Vol. 5, ed. E.M. Hetherington, J. Hagen, R. Dron, and A. Stein. Chicago, IL: The University of Chicago Press.
- Slaughter-Defoe, D., Kuehne, V., and Straker, J. 1992. African-American, Anglo-American, and Anglo-Canadian grade four children's concepts of old people and of extended family. International Journal of Aging and Human Development 35 (3): 161-178.
- Smith, E. R. 1990. Content and process specificity and the effects of prior experience. In Advances in Social Cognition Vol. 3, ed. T. K. Srull and R. S. Wyer, Jr. Hillsdale, NJ: Erlbaum.
- Smith, T., and Newman, S. 1993. Older adults in early childhood programs: Why and how. Young Children 48 (3): 32-35.
- Smith, E. R., and Zárate, M. A. 1992. Exemplar-based model of social judgment. Psychological Review 99: 3-21.
- Snyder, M. 1981. On the self-perpetuating nature of social stereotypes. In Cognitive processes in stereotyping and intergroup behavior, ed. D. L. Hamilton, 183-212. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Snyder, M., and Uranowitz, S. 1978. Reconstructing the past: Some cognitive consequences of person perception. Journal of Personality and Social Psychology 36: 941-950.
- Srull, T. K., and Wyer, R. S., Jr. 1979. The role of category accessibility in the interpretation of information about persons: Some determinants and implications. Journal of Personality and Social Psychology 37 (10): 1660-1672.
- Stangor, C. 1988. Stereotype accessibility and information processing. Personality and Social Psychological Bulletin 14 (4): 694-708.
- Stangor, C., and Lange, J. 1994. Cognitive representations of social groups: Advances in conceptualizing stereotypes and stereotyping. In M. Sanna ed., Advances in Experimental Social Psychology 26: 357-416.
- Stangor, C., Lynch, L., Duan, C., and Glass, B. 1992. Categorization of individuals on the basis of multiple social features. Journal of Personality and Social Psychology 62: 207-218.
- Stier, D. L., and Kline, D. W. 1980. Situational determinants of attitudes toward the elderly. Research on Aging 2 (4): 489-498.

- Strom, R. 1988. Intergenerational learning and curriculum development. Educational Gerontology 14: 165-181.
- Taylor, S. E., Fiske, S. T., Etcoff, N. L., and Ruderman, A. J. 1978. Categorical and contextual bases of person memory and stereotyping. Journal of Personality and Social Psychology 36: 778-793.
- Thomas, E., and Yamamoto, K. 1975. Attitudes toward age: An exploration in school-age children. International Journal of Aging and Human Development 6 (2): 117-129.
- Tierce, J., and Seelback, W. 1987. Elders as school volunteers. Educational Gerontology 13: 33-41.
- Triandis, H. C. 1971. Attitude and attitude change. New York: Wiley.
- Tuckman, J., and Lorge, I. 1952. Attitudes toward older workers. Journal of Applied Psychology 36 (3): 149-153.
- Tuckman, J., and Lorge, I. 1953. Attitudes toward old people. Journal of Social Psychology 37: 249-260.
- Wass, H., Almerico, G., Campbell, P., and Tatum, J. 1984. Presentation of the elderly in the Sunday news. Educational Gerontology 10: 335-348.
- Weinberger, A. 1979. Stereotyping of the elderly: Elementary school children's responses. Research on Aging 1 (1): 113-136.
- Weinberger, L., and Millham, J. 1975. A multi-dimensional, multiple method analysis of attitudes toward the elderly. Journal of Gerontology 30 (3): 343-348.
- Wilder, D. A., and Cooper, W. E. 1981. Categorization into groups: Consequences for social perception and attribution. In New directions in attribution research Vol. 3, ed. J. H. Harvey, W. Ickes, and R. J. Kidd, 247-277. Hillsdale, NJ: Erlbaum.
- Wilson, T. D., and Hodges, S. D. 1992. Attitudes as temporary constructions. In The construction of social judgments, ed. L. Martin, and A. Tesser, 37-65. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Wingard, J. A., Heath, R., and Himelstein, S. A. 1982. The effects of contextual variation on attitudes toward the elderly. Journal of Gerontology 37: 475-482.
- Wrenn, R., Merdinger, J., Parry, J., and Miller, D. 1991. Elderly and the young: A cooperative endeavor. Journal of Gerontological Social Work 17 (1/2): 93-104.
- Zandi, T., Mirle, J., and Jarvis, P. 1990. Children's attitudes toward elderly individuals: A comparison of two ethnic groups. International Journal of Aging and Human Development 30 (3): 161-174.

VITA

The author, Sony Damien Hoe, was born in Indonesia but lived in Singapore since the age of two. After graduating high school he joined the Republic of Singapore Navy where he served for six years. Mr. Hoe joined the internationally-renowned Singapore Airlines in 1985, which allowed him the opportunity to soak in the sights and sounds of different lands, and experience a diversity of cultures.

In January, 1986, Mr. Hoe entered Chaminade University of Honolulu, and after a year transferred to the University of Hawaii at Manoa. Mr. Hoe received his Bachelor of Arts degree in Psychology, with distinction, in December, 1988. While attending University of Hawaii he received the Pacific-Asian Scholarship for the 1987 and 1988 academic years.

In August, 1989, Mr. Hoe was accepted into Loyola University Chicago and in August, 1990, he was granted an assistantship in the psychology department, enabling him to complete the Master of Arts in 1995. In May, 1998, Mr. Hoe obtained the Doctor of Philosophy degree in Developmental Psychology from Loyola University.

APPROVAL SHEET

The dissertation submitted by Sony D. Hoe has been read and approved by the following committee:

Dr. Denise Davidson, Director
Associate Professor, Psychology
Loyola University Chicago

Dr. Scott Tindale
Professor, Psychology
Loyola University Chicago

Dr. David Mitchell
Visiting Professor, Psychology
Loyola University Chicago

Dr. Deborah Holmes
Professor, Psychology
Loyola University Chicago

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Psychology.

Mar. 26, 1998
Date

Denise Davidson
Director's Signature